• Exclusive survey of best IS workplace practices • Data on 94 corporate, government and university organizations • Spotlights on top locations, industries and CIOs

COMPUTERWORLD
BEST PLACES TO WORK

Volume 28 Number 24A June 15, 1994

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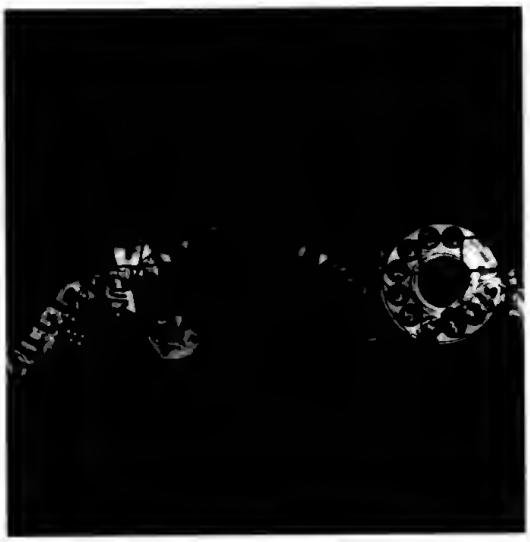

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inside:

Who pays the highest salaries in financial services? Which of the "94 Best Places to Work in IS" is increasing its staff the fastest? Who spends the most on IS training? These questions are answered, along with any others you may ask about the data profile of the leading organizations, in our comprehensive charts listing the 94 IS groups in rank order by industry. For a by the numbers look at the IS workplace, see page 46

Change is good. This could be the mantra for IS professionals, compared to their counterparts in other areas. While corporate downsizings and government budget cuts have decimated the ranks of some, they have also increased management's interest in technology to improve productivity. *By Michael Sullivan-Trainor* see page 8

Client/server and PC LANs are hot. AI is not. see page 10

Service is the hot spot of the '90s. Consumer products and finance offer the best opportunities for growth. *By Avery L. Jenkins* see page 12

Software companies take the prize for providing jobs for IS professionals in vendor companies. *By Avery L. Jenkins* see page 14

Every major region boasts solid IS opportunities. Pick your climate from our maps of where the best places are located. *By Jodie Naze* see page 16

Keeping IS salaries competitive takes more than money alone. Innovative companies are providing travel tickets and bonus days off as ways to add to IS pay without raising base salaries or paying extravagant bonuses. *By David Weldon* see page 18

If you thought company-paid child care and telecommuting were generous benefits, check out what some of the best companies do to keep their staffs happy and healthy. On-site restaurants, flex time and fitness programs are taking benefits to a new level. *By David Weldon* see page 21

Taking advantage of demographic shifts, IS organizations are hiring talented women and minorities. Smart IS groups are adding diversity to their staff makeups before population trends catch up with them. *By Melanie Menagh* see page 24

People, service, profit, in that order, is the recipe for Federal Express' staffing success, says CIO Dennis Jones. Q&A *by Leslie Goff* see page 33

COMPUTERWORLD

BEST PLACES TO WORK

Microsoft's CIO Chris Gibbons balances the high-energy, high-growth challenges faced by his IS staffers with communication, involvement in decision-making and by providing them with the opportunity to learn new technologies. Q&A *by Leslie Goff* see page 29

Working in IS at a top money-making company requires a good deal of wisdom about getting the attention of top management for IS projects. Managers at Pepsico, McDonald's and Johnson & Johnson talk about how they do it. *By Jennifer deJong* see page 30

Tying IS goals to business needs is the secret to sustained staff growth. *By Alan R. Earls* see page 34

Hiring is one thing. Keeping employees happy enough to stay put requires a long-term commitment to linking their needs to company goals. Learn how the best companies keep turnover low. *By Alan R. Earls* see page 37

Frank McDonough, assistant commissioner of Federal IRM at the General Services Administration, talks about making government staff investments pay off. Q&A *by Leslie Goff* see page 41

If your performance measurement is based on producing lines of code, it's time for an overhaul. Find out how the best companies tie performance to business goals. *By Lance B. Eliot* see page 42

On-the-job training is a poor substitute for the real thing. Leading companies invest early and often, making training part of their culture. *By Lance B. Eliot* see page 44

Read about confidence, baboons and the lust for sexier silicon in the IS workplace column by former Monty Python member-turned-training film coach, John Cleese. see page 60

Meet Michele Chocholek, age 26, a systems analyst at 3M Co. and a newcomer to IS. Find out how professionals early in their careers, like Michele, view things differently from IS veterans in our professional profiles. *By Melanie Menagh* see page 26

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COMPUTERWORLD

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Editor's note: Welcome to the IS workplace

Why is Pepsico such a great place to work? The New York-based beverage and food maker's IS staff is growing. The IS turnover rate is 5%, among the lowest in its industry. Pay for high- and mid-level staff is in the top tier. And its hardware and major applications are less than three years old. It's a hotbed for client/server applications, PC LANs, GUIs and wireless technologies.

Pepsico is one of 94 great employers you'll find in the following pages.

We asked IS professionals in the Fortune 500, academic institutions and government agencies who they admire most. Their criteria for what makes a great place to work may surprise you. IS professionals look for a challenging work environment, access to the latest technology, a competitive, though not extravagant, salary and varied benefits that range from telecommuting to child care.

The bottom line is that there are a lot of great opportunities in companies, government and universities where IS pros can find their dream jobs. This report spotlights the best of them.

Let us know what you think of this issue. Call me at (800) 343-6474, ext. 229, or contact me via Internet at mstrainor@cw.com.

Michael Sullivan-Trainor

THE 94 BEST PLACES TO WORK IN IS

(In order of rank)

CONSUMER PRODUCTS AND SERVICES

Pepsico, Inc.
CPC International, Inc.
Duracell, Inc.
Colgate-Palmolive Co.
The New York Times
Helene Curtis Industries, Inc.
The Coca-Cola Co.
Farmland Industries, Inc.
The Turner Corp.
Harsco Corp.

FINANCIAL SERVICES

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Golden West Financial Corp.
New York Life Insurance Co.
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First Fidelity Bancorp, Inc.
Household International, Inc.
Travelers Insurance Co.
Unum Corp.
Bankers Trust New York Corp.

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THE 94 BEST PLACES TO WORK IN IS

(In order of rank)

PETROLEUM, CHEMICALS AND UTILITIES

Burlington Resources, Inc.
Occidental Petroleum Corp.
Pacific Gas & Electric Co.
Philadelphia Electric Power Co.
Shell Oil Co.
Entergy Corp.
FMC Corp.
Sherwin-Williams Co.
Ohio Edison Co.
Du Pont Co.

TRANSPORTATION

Federal Express Corp.
WorldCorp, Inc.
United Parcel Service, Inc.
Southwest Airlines Co.
Werner Enterprises, Inc.
CSX Corp.
AMR Corp.
Carolina Freight Corp.
J. B. Hunt Transport Service, Inc.
Norfolk Southern Corp.

TELECOMMUNICATIONS AND COMPUTERS

Bell Atlantic Corp.
Microsoft Corp.
BellSoutb Corp.
AT&T Corp.
Hewlett-Packard Co.
Ameritech Corp.
Electronic Data Systems Corp.
MCI Communications Corp.
Sun Microsystems, Inc.
Compaq Computer Corp.

WHOLESALE AND RETAIL

McDonald's Corp.
Levi Strauss Associates, Inc.
Kellwood Co.
VF Corp.
Wal-Mart Stores, Inc.
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Sysco Corp.
Publix Super Markets, Inc.
Supervalu, Inc.
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STATE AND FEDERAL GOVERNMENT

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U.S. General Services Administration
U.S. Department of Treasury
State of Texas
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State of California
U.S. Department of Agriculture
U.S. Department of Defense
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EDUCATION

Case Western Reserve University
University of Miami
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Duke University
MIT
St. Louis University
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University of Minnesota
University of Texas

EXPERIENCE WANTED

IS STAFFS ADVANCE STEADILY AMID RAPID CHANGE

Corporate, government and university organizations report relatively low turnover in their information systems ranks, a consistently basic investment in training as a percentage of the IS budget and a low level of students hired straight from college. The majority of organizations report a much higher level of experienced IS professionals hired.

TURNOVER RATE	TRAINING BUDGET	COLLEGE HIRES
5%	2-5%	10%

By Michael L. Sullivan-Trainor

Seasoned professionals looking out at the IS workplace in the last decade of the 20th century can only stand back and stare with wonder. The changes are beyond belief for those who grew up with more than two decades of centralized computing. The data center – once the heart and soul of the information systems profession – has been downsized, its staff siphoned off to decentralized user departments. Mainframes, which defined the highest levels of technical expertise in systems and programming, are now being forced into server roles. PCs and networks must now be placed at everyone's disposal, and applications have to be easily accessible, transparently linked and extremely flexible to change.

The net effect on the professional is that hard-earned skills have quickly become outdated, and an ever-changing set of new technical and business skills must now be mastered — fast.

To a large extent, these shifts represent the sea change that business, government and educational organizations are facing. Staff reductions include IS along with everyone else. New initiatives now more than ever automatically demand novel IS projects and teams to support them.

Our survey of more than 600 large IS organizations across all major industry segments indicates that both new and current projects keep staffs growing faster than the downsizing. The survey found that 60% of the organizations will add to their staffs next year. Ten percent of their hiring needs will include college graduates, but by far organizations want professionals with implementation experience, not just knowledge about new technologies.

These organizations report that the majority of their IS groups (62%) already have workers with an average of eight to 10 years of IS experience. The percentage is lower in business (56%) and education (59%) than in government (69%). Despite these long track records, IS professionals do not stay long in the same organization. Sixty-five percent of the organizations report that their professionals stay only two to five years in one position.

However, the layoff picture may keep more corporate IS professionals where they are and deter government and education professionals from switching to the private sector. Seventy-one percent of the respondents say they have never had a layoff in IS. But only 42% of businesses make that boast, while 77% of government and 80% of education organizations report no layoffs. Twenty-two percent of the businesses report layoffs for 1993 — the highest number for any year. Only 7% say there will be IS layoffs this year.

THE PAY PICTURE

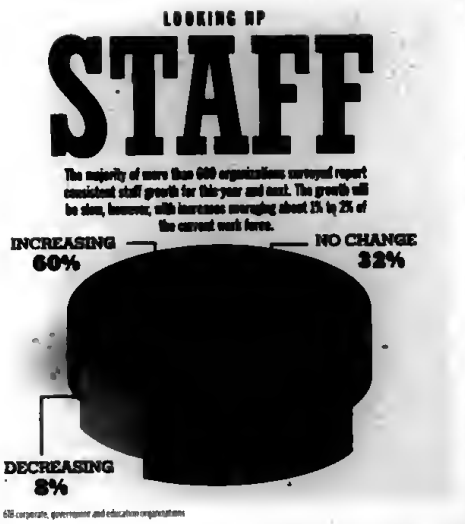
Apart from having job security, IS professionals are concerned about pay, which has not been rising as fast as it did in the heady days of the growing data center development projects. Raises averaged 2% to 5% for 57% of the IS organizations in 1993. The same range was reported by 59% of companies, 52% of government and 62% of education organizations. Only 11% of the organizations report giving raises higher than 5%. Raises of less than 2% were given by 27% of the organizations.

The bonus picture was even less attractive last year. Sixty-six percent of the organizations did not grant bonuses. This total was skewed by the education organizations, 90% of which did not give bonuses. Sixty percent of government agencies gave no bonuses, and 31% of businesses did not give bonuses. On the bright side, 33% of the private sector firms gave bonuses of 2% to 10% last year.

Salary levels vary strongly from the private sector to the public sector, especially as professionals increase their experience and responsibilities in the organizations. The highest-paid IS professionals receive salaries of more than $100,000 in 25% of the corporations surveyed. Fifteen percent of corporations pay $80,000 to $100,000. Only 8% of government agencies and 2% of educational organizations pay their top professionals more than $100,000. Fifty percent of the educational organizations report top salaries of $40,000 to $60,000, compared with 35% of government agencies and 9% of companies.

The pattern continues for mid- and low-level professionals. At 54% of the educational institutions, midlevel salaries are $20,000 to $40,000, compared with 30% of government and 9% of corporations. Corporate midlevel salaries are $40,000 to $60,000 at 27% of the companies and $60,000 to $80,000 at 23% of the companies. Forty-eight percent of government agencies report $40,000 to $60,000 salaries for this level.

More consistency among the segments occurs at the lowest level. The majority of all three groups report $20,000 to $40,000 salaries. This includes three quarters of government and education and 53% of businesses. Nineteen percent of education, 14% of government and 4% of businesses report salaries of less than $20,000. Conversely, 2% of education, 5% of government and 13% of businesses report high-end salaries of $40,000 to $60,000 for low-level employees.



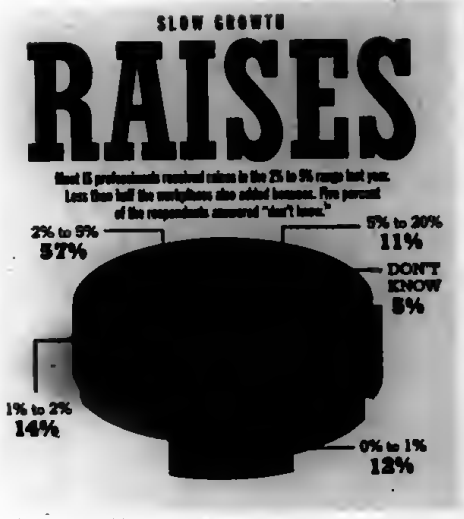
PEOPLE ISSUES

With all the organizational and technological change, training has become more important than ever. Forty-two percent of the organizations spend 2% to 5% of their IS budgets on training IS professionals. Despite the educational environment, universities are not that much more aggressive than other areas in spending on training. In fact, 39% of the educational organizations report spending less than 2% of their budget on training, compared with 34% of government agencies and 21% of corporations.

A small segment (12%) spends 6% to 10% of their budgets on training. An even smaller slice (2%) spends 11% to 20%, and a sliver (1%) spends 21% to 30% on training.

Other ways to improve personnel performance include formal recognition for a job well done, open communication among employees and a sense of autonomy. But 55% of the organizations report they do not have formal recognition programs. Businesses were divided 50-50 between those that do and those that do not have formal programs. Government is strongly in the yes category (66%), but education is squarely in the no camp (75%).

Perhaps there is less need for formal recognition when the lines of communication offer ample opportunity for informal acknowledgment. Forty-four percent of the organizations say face-to-face conversation is the primary communication method. Twenty-two percent use informal hard copy or electronic notes, while 20% use formal memos. Six percent like meetings, and 3% rely primarily on electronic mail. The group breakdown is virtually the same, with the government showing a higher interest in formal memos.



PERSONAL ATTENTION

If you work for IS in one of these organizations, expect managers to have a span of control of six to 10 employees each in companies and government agen-

Technology in the driver's seat

How system trends affect the IS workplace

Is new technology making more headway in government or the private sector? What impact is your organization's move to client/server having on turnover and training costs? What technologies relate to increasing staff needs?

Our survey attempts to answer these questions by asking more than 600 IS organizations how important and how current IT major technology areas are to them. We then compared their answers with what they say about staff growth, turnover and training.

The results indicate that client/server computing is most important to business, which rate it a 4 on a scale of 1 to 5, and less important to education and government organizations, which assign it an average rating of 3. Overall, PCs and LANs top every category's importance rating. PC LANs are also among the most current for all respondents.

Organizations with higher turnover (greater than 5%) and higher training costs (greater than 6%) than their peers also rate client/server higher in importance.

The chart below illustrates the differences for various categories and provides an overview of which technologies are most important overall. PCs, LANs and electronic mail are also the newest technologies in their shops, according to the organizations.

IMPORTANCE OF TECHNOLOGY

	STAFF (shrinking / growing)		TURNOVER (low / high)		TRAINING BUDGET (low / high)		CORP	GOV'T	EDUCATION
PCs	■	■	■	■	■	■	■	■	■
E-mail	■	■	■	■	■	■	■	■	■
LANs	■	■	■	■	■	■	■	■	■
GUIs	■	■	■	■	■	■	■	■	■
WANs	■	■	■	■	■	■	■	■	■
Client/server	■	■	■	■	■	■	■	■	■
Mainframes	■	■	■	■	■	■	■	■	■
Midrange	■	■	■	■	■	■	■	■	■
32-bit operating system	■	■	■	■	■	■	■	■	■
Notebooks	■	■	■	■	■	■	■	■	■
Desktop application	■	■	■	■	■	■	■	■	■
Imaging	■	■	■	■	■	■	■	■	■
Object programming	2	2	2	2	2	3	3	2	2
CASE	2	2	2	2	2	3	3	2	2
RAID	2	3	2	2	2	3	2	2	2
Wireless	2	2	2	2	2	2	3	2	2
Artificial intelligence	2	2	2	2	2	2	2	2	2

Based on a 1-to-5 scale, where 1 is not very important and 5 is very important

METHODOLOGY

The companies on our list were selected based on a 600-organization survey that asked Fortune 500 companies, federal and state agencies and large universities to nominate their peers for recognition as the best places to work. The candidates were nominated based on providing the best opportunities for training, advancement and compensation.

Companies were given points based on how well they fared in this peer rating. Then statistics from the companies were examined in the following areas: staffing, turnover, salary, training, the age of applications and primary hardware platforms and benefits.

Industry averages were devised for these categories from the whole sample. Those companies with higher statistics than the industry average received more points. These point totals – one for each category – were added to the peer rating points to calculate the total points.

Companies ranked here were nominated by peers for being at the top of the industry as the best places to work, as well as for excelling in the key categories of staffing, turnover, salary, technology currency and benefits due to investing or managing those factors better than the industry average.

The survey was conducted by telephone by First Market Research Corp. in Austin, Texas. Charts appearing in each section are based on organization rankings for that category only, unlike the main chart listing all 94 companies, which is based on total score.

cies. But in education, expect a tighter relationship, with most organizations having from two to five employees per manager.

Performance measurement plans also figure prominently. IS organizations in our survey report that their performance plans are focused either on individual performance (41%) or on a team's contribution (41%). Sixteen percent are focused on meeting a manager's requirements.

The private sector has the greatest number of companies that emphasize teams (48%), while education is the opposite, with 39% focused on teams and 42% on individual performance.

Besides dealing with technology and business change, organizations entering the second half of the 1990s must adapt to changing demographics. More women and minorities will be candidates for positions formerly held by white males. Diversity is becoming the name of the game.

Our survey found that minorities already comprise 6% to 10% of IS professionals at 21% of the organizations and 11% to 20% at 17% of the organizations. Taken together, these indicators form a profile of IS organizations in the three segments and demonstrate differences in pay, job security and management emphasis.

An IS professional must consider these trade-offs when deciding whether to work in business, government or education. But no matter where the person chooses to work, adapting to rapidly changing organizational and technological issues will be the agenda for the foreseeable future. ◆

Sullivan-Trainor is Computerworld*'s senior editor, CW Guide.*

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Excellent organizational and people skills are essential for each of the Systems Administrator positions, as are advanced UNIX shell script writing skills and a BSCS degree or equivalent.

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E-mail — Manage the qad university environment and perform E-mail administration tasks, configuring classroom PCs/servers, installing and maintaining databases and managing E-mail servers. College level courses and/or experience in UNIX and DOS systems administration required, with experience installing/configuring applications software and knowledge of UNIX and DOS networking hardware and concepts.

Network Administrator — Must possess 3+ years experience with knowledge of bridges, routers, channel banks, DSI/CSUs, network management tools, TCP/IP, frame relay networks, Net BIOS, Netbeui and IPX.

Manufacturing/Distribution/Financial/GUI Product Specialists — Positions require 10 years experience, a BS/BA degree and APICS certification. Expertise in applications implementation and/or analysis for manufacturing market is essential. Involves international travel.

R&D Support Specialist — Requires BS/BA degree, CPA, APICS certification (CPIM/CFPIM desired) and 3-5 years manufacturing experience.

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Software Engineers — Experience in UNIX and SW development is required, as well as a related BS degree and knowledge of databases, 4GLs, and/or "C".

Business Application Programmers — Requires BSCS or equivalent and experience developing business applications.

Business Systems Programmer/Analysts — Requires BS/BA degree or equivalent background and 3-7 years experience in financial and/or general business systems support.

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GLOBAL SUPPLY CHAIN MANAGEMENT

Ralph Mercer

BY AVERY L. JENKINS

Despite corporate downsizing, government belt-tightening and the limits of education spending, information systems as a profession is healthier than ever. More than 60% of the 618 companies surveyed in our Best Places to Work study have increased their staffs in the past year and plan to increase them further in the year ahead.

These results correspond with U.S. Department of Labor statistics, which report that the private-sector demand for IS managers will increase by 32% through the year 2000. Demand for systems analysts will increase 52%, and the need for programmers by business will increase nearly 49%.

Also, 1994 IS hiring will show an 18% increase over last year, with a 6% average increase in salaries, according to the Association for Systems Management (ASM).

As far as hiring goes, corporations — more than government or higher education — are showing the most innovative use of technology. Consumer products and services and certain segments of financial services are showing the most demand for IS staff. Manufacturers of high-tech products for health care top the growth charts, according to a compound annual average for 1987 to 1994 compiled by the U.S. Department of Commerce. Other Commerce Department figures indicate that informa-

Growing demand for IS workers

Companies in service industries — from consumer goods to finance — are IS hot beds

tion services firms are among the fastest growing organizations.

But at the same time, IS spending is heading down in some segments.

For example, according to a 1993 survey of information technology managers conducted by International Data Corp. (IDC) in Framingham, Mass., the transportation/communications/utility segment shows the greatest percentage of companies that have flattened or contracted IS spending.

Along with these organizations, firms in discrete process manufacturing and the insurance industry are also reining in their IS budgets.

Retail companies, which were hit hard in the past few years, also show a significant number of companies decreasing spending.

Spending for higher education information services, while growing, is still not on a par with other sectors. A survey of business schools conducted by the University of California at Los Angeles two years ago shows the average business school allocated only $297,890 for its computer operating budget, which comprises an average of 3.5% of the school's total budget.

"Oftentimes, universities produce the thought leadership, but there's a real discrepancy between what's being researched and taught and what's being done," says Lois Slavin, founder and principal at Changing Communications in Brookline, Mass., a consulting and training firm.

Yet even those groups that are slowing their IS spending are increasing their use of leading-edge technologies. ASM numbers show that the biggest growth is in the groupware, telecommunications and client/server arenas.

According to IDC, groupware adoption is highest in both insurance and manufacturing, with education falling in second place and government in third place.

Similarly, the percentage of companies exploring object-oriented programming was highest in the private sector, with insurance and manufacturing leading the way.

However, the increase in demand for client/server skills does not necessarily spell good news.

"In every region surveyed, pursuit of an open systems strategy was more likely to occur among sites that were downsizing their operations," the IDC survey concluded. The four leading adopters of this technology are education, insurance, transportation/communication/utilities and government.

Thus, such organizations will be scrutinizing new hires for a match to specific job requirements.

One segment that has a poor reputation for cutting-edge technology is the federal government. It has been frequently criticized for bureaucratic red tape that prohibits agencies from adopting new technologies quickly. "The technology can change several times by the time equipment is purchased and

INDUSTRIES

The industry groups covered in Best Places to Work each have different leadership positions, with services growing the most and paying the best and government and education having the most security and benefits.

- **Consumer products and services**
- **Energy and chemicals**
- **Financial services**
- **Manufacturing**
- **State and federal government**
- **Telecommunications and computers**
- **Transportation**
- **Wholesaling and retailing**
- **Universities**

Source: Best Places to Work Survey

SOFTWARE IS KING

Growing at a rate of 5% or more during the last couple of years, IS staffs at the computer firms cited as the "Best Places to Work" are exceptions, compared with some of the IS staffs at vendor companies.

While the computer industry would seem to be a mecca for IS professionals because information technology is not only respected but also the *raison d'etre*, the IS job market is growing about one quarter as fast within the industry as it is in the overall U.S. market.

One exception to this is business analyst positions, which are growing faster than the industry average.

There is also a significant disparity in the employment outlook between the hardware and software industries, says Bob Cohen, installed," Slavin says.

But there are some hot spots in the government, she adds. At the U.S Department of Defense, for example, "they are doing incredible work" in developing new methodologies to govern information technology investment.

GOING WHERE THE PAY IS

Compensation for analysts and programmers tends to be better in private industry than in government

For example, while the federal government hires programmers and analysts at a starting salary of only $17,000, the entry-level salary in the private sector is closer to $19,000.

For upper-echelon managers, the pay range is even larger, as is the discrepancy between the public and private sector. While the average pay for IS managers ranges from $40,000 to $100,000, according to Labor Department figures, the incentives are greater in private industry.

But numbers do not tell the whole story, Slavin cautions. Whether an IS professional will find happiness in industry, government or higher education depends on the objectives and management styles of the IS group.

TOP TEN

These computer companies scored well in most of the Best Places to Work categories

- Apple Computer, Inc.
- Automatic Data Processing Corp.
- Compaq Computer Corp.
- Electronic Data Systems Corp.
- Hewlett-Packard Co.
- Intel Corp.
- Microsoft Corp.
- Novell, Inc.
- Oracle Corp.
- Sun Microsystems, Inc.

Source: Best Places to Work Survey

COMPUTER SCIENCE

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U S WEST TECHNOLOGIES, INC.

The biggest management dissimilarity among the three is that "their missions are often very different," she says. "For business, the mission has been to make money. For governments, it has been to provide services. For universities, it has been to educate."

But "there is a movement toward less differentiation because all are realizing that they have to be more customer-focused. That's becoming the overarching concern for everybody."

The role of IS in customer-focused organizations, Slavin adds, is becoming more important because IS increasingly provides the services that are the gateways to customers. Thus, the demand for high-quality IS personnel increases, as do the opportunities.

In this environment, keeping up with changing customer demands and matching resources to meet them is the greatest challenge: "I think, overall, a good IS organization is able to deal with discontinuous change — change that is unexpected, that happens for no apparent reason," Slavin says.

Jenkins is a free-lance writer based in Ansonia, Conn.

SOFTWARE IS KING

vice president at the Information Technology Association of America. This is due to "the financial performance of [the hardware companies] and the pressures that they are under to downsize and show growth on their income statements," Cohen says.

Client/server computing firms, however, are the exception.

"There's quite a bit of expansion there," says Vincent Rios, Northeast vice president at Source Services in White Plains, N.Y.

Software companies are, for the most part, not under such great stress, Cohen says.

Within the software segment, companies that are hiring include computer-aided software engineering and fourth-generation language tools developers, according to John Reever, senior IS recruiter at RJS Associates in Hartford, Conn. Object-oriented programming is also a skill that is much in demand, he says.

Software companies are showing "an explosive employment rate," Rios says. He adds that much of the expansion stems from the movement of software firms into a service role. Instead of just selling the software, they are also selling the installation and maintenance — tasks traditionally associated with an internal IS organization.

The difference, Rios says, is that instead of serving a client internal to the firm, the new IS person provides service to an external client.

Also, salaries for these posts can range higher than for those in traditional IS organizations serving the company internally.

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SDK
C, C++
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Basic
Visual Basic
Rose Specialist

CLIENT/SERVER
Program Managers
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Senior Analysts
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Systems Administrators
CRC CARDS
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RDB
ACTION Processing

MAINFRAME MID RANGE
Analysts
DBA's
DEVELOPERS
DB2, CICS, IDMS
IMS DB/DC
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Client/Server Developers
Data Voice Comm. Engineers
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BEST PLACES TO WORK

Levi Strauss Associates, Inc
Microsoft Corp.
Occidental Petroleum Corp
Pacific Gas & Electric Co
State of California
State of Washington

Hot spots
San Jose, Salt Lake City, Seattle

Population change
9.9%

Unemployment rate
7.7%

Employment growth rates

1992-1993	0.8%
1993-1994	1.2%
*1994-1995	2.0%

Promising industries
High tech, telecommunications

Job count:
Systems analysts
1994 81.7K
*Percent of growth between 1994 and 1998 11.5%
Programmers
1994 129.8K
*Percent of growth between 1994 and 1998 12.1%

Associations
American Electronics Association,
Santa Clara, Calif.

Tidbits

Although California's hiring will pick up, high taxes, heavy regulation and other costs continue to take their toll.

Comings and goings

There is a strong movement toward the Southeast and the mountain states, both of which have been experiencing the highest employment growth rates over the last few years.

BEST PLACES TO WORK

Amentech Corp.
3M Co.
Case Western Reserve University
FMC Corp.
Helene Curtis Industries, Inc.
McDonald's Corp.
University of Wisconsin

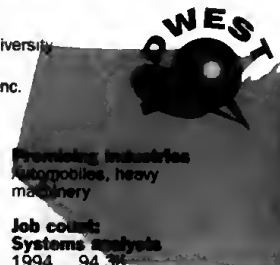
Hot spots
Detroit, Minneapolis

Population change
3.7%

Unemployment rate
5.2%

Employment growth rates

1992-1993	1.8%
1993-1994	2.2%
*1994-1995	1.8%



Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin

Promising industries
Automobiles, heavy machinery

Job count:
Systems analysts
1994 94.3K
*Percent of growth between 1994 and 1998 9.7%
Programmers
1994 144.8K
*Percent of growth between 1994 and 1998 10.3%

Associations
Association for Systems Management, Cleveland
Corporate Association for Microcomputer Professionals, Northbrook, Ill.
Data Processing Management Association, Park Ridge, Ill.
Society for Information Management, Chicago

Tidbits

Employment as a whole is constrained by recent area layoffs. Minneapolis, however, will continue to prosper due to rising demand for its diversity of manufactured products and its array of health, financial and business services.

Comings and goings

Similar to the Northeast, firms are migrating out of the Midwest because of high unionization rates, labor costs and utility and tax rates.

Sources: Bureau of the Census, Bureau of Labor Statistics, Washington Regional Financial Associates, Inc., West Chester, Pa.; Best Places to Work Survey
* Projected

NATIONAL AVERAGE

Population change**	**5.6%**	**Employment growth rates****	
		1992-1993	**1.5%**
		1993-1994	**1.9%**
Unemployment rate	**6.4%**	*1994-1995	**1.8%**

BEST PLACES TO WORK

CPG International, Inc.
Duracell, Inc.
Johnson & Johnson
Merck & Co.
Merrill Lynch & Co.
Philadelphia Electric Power Co.

Hot spots
Boston, New York

Population change
3.7%

Unemployment rate
7.0%

Employment growth rates

1992-1993	0.8%
1993-1994	1.1%
*1994-1995	1.4%

Promising industries
Finance, biotech

Job count:
Systems analysts
1994 99.6K
*Percent of growth between 1994 and 1998 7.0%
Programmers
1994 161.3K
*Percent of growth between 1994 and 1998 6.8%

Associations
Association for Computing Machinery, New York
Institute of Electrical and Electronics Engineers, Inc., New York
Microcomputer Managers Association, New York

Tidbits

Few factors are driving the economy. Job losses in defense and manufacturing have kept prices stagnant. Finance and insurance industries are also cutting back. New York's metro area is showing growth, however.

Comings and goings

Few businesses are moving into the area. Companies are heading south and west searching for lower costs.

ticut,
achusetts,
Hampshire,
ersey,
York,
nnsylvania,
Rhode Island,
Vermont

BEST PLACES TO WORK

Bell Atlantic Corp.
Federal Express Corp.
U.S. Department of Justice
U.S. General Services Administration
University of Miami
WorldCorp, Inc.

Hot spots
Atlanta, Austin, Dallas, Raleigh-Durham

Population change
7.0%

Unemployment rate
6.1%

Employment growth rates

1992-1993	2.9%
1993-1994	2.7%
*1994-1995	2.3%

Promising industries
Computers, software, telecommunications

Job count:
Systems analysts
1994 138.4K
*Percent of growth between 1994 and 1998 11.7%
Programmers
1994 205.4K
*Percent of growth between 1994 and 1998 12.8%

Associations
Electronic Messaging Association, Arlington, Va.
IEEE Computer Society, Washington

Tidbits

Engineering and medical schools, top-notch medical and biotechnology companies and a thriving computer software and telecom business are driving the South's marketability factor.

Comings and goings

Some of California's high-tech component is moving to Texas to escape high costs. Midwestern businesses, such as auto and heavy equipment manufacturers, are also slowly migrating to the Southwest.

aryland,
sissippi,
Carolina,
Oklahoma,
South Carolina,
Tennessee, Texas,
Virgina, W. Virginia

re, District
Columbia,
Florida, Georgia,
Kentucky,
Louisiana,

** The population change represents the percent of change from July 1, 1990 to July 1, 1995. Employment growth rates include nonfarm employees only. Figures for systems analysts also include computer scientists

PERKS *and* PAYBACKS

From tickets to time off, IS organizations are looking into new ways to reward employees for services above and beyond the call of duty

by david weldon

Your company is in the middle of a major remodeling project, and along with it comes the replacement of the old IS network you've been trying to rid yourself of for years.

The project means extra hours for the information systems department — lots of them. So what do IS staffers get out of it?

There's always the satisfaction of a job well done, of course. But besides that, how does a budget-minded company reward such acts of valor without impacting the bottom line?

It may be as simple as making your IS people go away.

Many companies are finding that one creative way to compensate IS employees for excessive overtime is with tickets and time off.

That notion is being heeded at Helene Curtis Industries, Inc., where the human resources department is taking a very close look at how to fairly compensate IS employees for excessive overtime without setting dangerous precedents for the rest of the organization.

"We're looking at a lot of human resources issues for IS having to work at all hours," explains Roger Jimenez, human resources generalist at the Chicago-based company.

Jimenez says the same compensation issue affects other departments, but nowhere is the need for overtime felt more than in the IS department. Resolving the problem is a delicate tightrope act because any solution for IS must also be offered to all other departments.

"The concern in general is how do you administer creative compensation fairly and consistently?" Jimenez asks. And throwing money at the problem is not the solution, he adds. "Usually, IS people realize they're exempt from overtime pay, and it goes with the territory," he says. But they do want compensation for excessive overtime.

Helene Curtis is looking to employees themselves for the solution. Four months ago, it formed a human resources task force to address creative compensation. Each of the 12 IS divisions, representing 140 employees, has one member on the task force. The group is expected to make recommendations in three or four months.

Companies wrestling with how best to compensate their IS staffs may find that special team proj-

ects call for team measures.

Special projects now make up a significant portion of many IS employees' responsibilities. In addition to demanding extra work hours, projects also mean the immediate supervisor may no longer be the best judge of an IS staffer's job performance. That role may now fall on several shoulders and involve peers as well as managers.

As a result, many companies, such as Pfizer, Inc. in New York, are taking a closer look at the job performance review process.

Pfizer tested the employee morale waters a year ago to identify the top compensation concerns among employees. The company surveyed 1,000 employees in the finance group, including IS staffers.

By far the top concerns among all employees, says John Cronin, controller of the Corporate Information Technology Division, were proper pay for performance and recognition of contributions to team projects. The challenge for management is to make sure every employee's full contributions are recognized and weighed in the compensation process.

If compensation beyond salary is a top concern in plotting your IS career, the government may be the place for you. Government IS employees generally earn decent pay as well as bonuses and are in high demand, according to Dean Erwin, a deputy assistant secretary at the U.S. Department of Defense.

"Most government agencies require a lot of automation," and that means they place a high value on IS professionals, Erwin says. That value is paying off for em-

TOP TEN

These organizations provide above-average pay ranges for senior, mid-level and junior IS professionals

- Bell Atlantic Corp.
- Helene Curtis Industries, Inc.
- McDonald's Corp.
- Merrill Lynch & Co.
- The New York Times
- Occidental Petroleum Corp.
- Pfizer, Inc.
- Unum Corp.
- U.S. Department of Defense
- U.S. Department of Justice

Source: Best Places to Work Survey

INFORMATION SYSTEMS PROFESSIONALS

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- Telecommunications
- Network Support-Voice & Data

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ployees in salaries, job security and an emphasis on educational training. The result is that many IS professionals choose to grow old in service to their country. Erwin, for example, says he has a low turnover rate in his 93-member department.

Offering attractive IS compensation packages that don't hurt the bottom line can be a risky proposition. But one of the more innovative IS compensation programs puts the risk on the other foot — with the employee.

At Bell Atlantic Corp. in Arlington, Va., top managers want to keep attracting top IS pros and offering top salaries. But they've decided to dangle a portion of the salary like a carrot on a stick.

Bob Baglio, director of quality and administration, says, "They're requiring that you put a little bit of your salary at risk every year."

Bell Atlantic is offering top salaries in IS, but a portion of each salary is based on meeting performance goals. Two criteria determine whether the employee pockets the at-risk portion: how well the company did that year and "how well you did at meeting your self-set goals," Baglio says.

IS employees at Bell Atlantic can potentially earn up to 20% more than what would be normal base pay for their professional level.

Bell Atlantic is also looking into other innovative compensation plans: higher salaries for nonmanagers and compensation for added training. The idea is to reward people not only for performance but also for helping the company meet future needs by being trained in new areas.

"Also, we're looking at how employees can compete for higher salaries. Some people aren't interested in being managers. We're creating a technical level that can compete for the same salaries," Baglio says.

But this forward thinking didn't come effortlessly, Baglio says. "We're having to think about new ways to compensate people, to challenge them," he explains. This is vital, he adds, if the company is to change the work culture and prepare employees for the future.

Weldon is a Computerworld *associate editor, Management.*

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BEYOND the benefits BASICS

Job skills and flexibility are more important than ever to IS

Benefits have become a big issue for information systems groups. Faced with slow salary growth, a mobile labor pool and shortages in leading-edge skills, managers are prepared to make deals for the best talent. Moreover, IS staffers are demanding greater choice in benefits, from flexible work hours to customized medical plans and family leave. As a result, leading-edge firms are serving up creative benefits that go beyond traditional basics.

by david weldon

By far the benefit employees most desire is flexible work hours. Whether the reasons are commuting concerns or child care demands, employees want control over when they come to work and when they leave.

That demand will increase in the next few years, says Fred Heiner, director of the Michigan Agriculture Department's IS division in Lansing.

In addition to flexible work hours, companies should consider offering alternate work arrangements such as telecommuting and four-day work weeks, says Tracy Lewis, senior professional recruiter at Principal Financial Group, Inc. in Des Moines, Iowa.

Principal Financial offers flexible work hours to all employees, with the work day starting from 7 a.m. to 10 a.m.

Another top priority among employees is comprehensive medical and dental coverage, and again, the call is for choice. But with a wide variety of needs among employees, some innovative companies are finding that the best approach is cafeteria-style.

For Bell Atlantic Corp. in Arlington, Va., cafeteria-style means each employee is given a certain amount of money to spend on benefits. He can

BENEFITS MENU FOR EMPLOYEE SATISFACTION

FLEXIBLE HOURS
REASONS: Commuting time, child care demands and personal schedule control
FORECAST: Increasing demand

COMPANY-PAID CHILD CARE
REASONS: Tax-free dollars for child care
FORECAST: Increasing demand

TELECOMMUTING
REASONS: Employees can make their own hours to work with system and do other IS tasks
FORECAST: Increasing demand

COMPREHENSIVE MEDICAL AND DENTAL
REASON: Expected standard benefits — new wrinkle is desire for provider choice
FORECAST: Increasing demand

FITNESS PROGRAMS
REASONS: Desire to use lunch breaks/free time to exercise
FORECAST: Moderate demand

INNOVATIVE CORPORATE BENEFITS
- Company choir and band
- On-site commercial restaurant

GOVERNMENT BENEFITS
- Ability to change agencies but maintain same benefits/grade level
- Option to take sabbaticals; high level of training opportunities

EDUCATION BENEFITS
- Tuition-free education
- Ability to take sabbaticals

choose from various offerings or pocket the money. "Each employee is given an amount to spend, and they can tailor their benefits to their own needs. If they don't spend it all, the money is still theirs," says Bob Baglio, director of quality and administration.

Other leading-edge firms are showing a healthier attitude about keeping employees fit. Fitness and wellness programs are becoming more popular.

At Principal Financial, for example, benefits mean more than profit sharing or vacations. They are a comprehensive approach to keeping employees happy in mind, body and spirit.

Fitness buffs are taking advantage of Principal Financial's wellness facility, complete with nautilus equipment and life cycles. The company also offers volleyball and basketball, as well as running and bicycle clubs. Principal Financial even has its own choir and band.

Popular benefits include the ability for staff to earn extra vacation or personal days. "We have a very liberal vacation policy," Lewis says. "We reward good attendance with additional vacation. For every month an employee has perfect attendance, they can earn an extra half day of vacation."

Being in the insurance business, Lewis says, Principal Financial offers its 7,000 employees a "very good health plan." But what makes it unique is that the firm has "opened it up to all kinds of family members." These include live-in partners and principal dependents other than children.

TOP TEN

These organizations offer an above-average suite of benefits for their industry groups

- Bell Atlantic Corp.
- Bankers Trust New York Corp.
- Case Western Reserve University
- Duracell, Inc.
- Household International, Inc.
- 3M Co.
- Principal Financial Group, Inc.
- State of California
- State of Michigan
- U.S. Department of Defense

Source: Best Places to Work Survey

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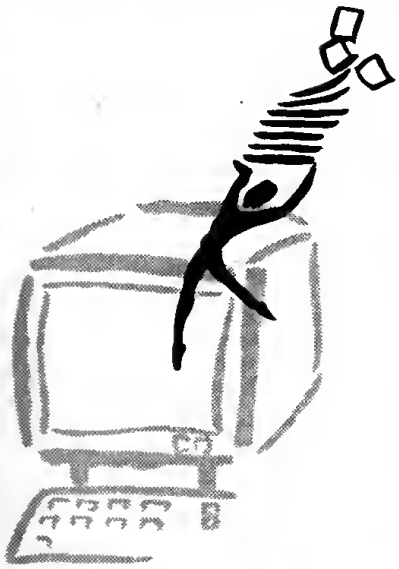

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BENEFITS

While many companies can't afford to offer the benefits that Principal Financial does, Lewis says there are certain basics that should be included on any benefits menu: comprehensive medical and dental plans and a pension or 401K plan.

Heiner's must-have list includes the same items, but he adds a vision care plan. He says the 10 IS employees in his Automated Services Division take full advantage of the vision plan.

IS employees concerned about job security may find that the government sector is the place to be.

That is the opinion of Dean Erwin, assistant deputy secretary of the U.S. Department of Defense. Erwin says IS professionals are hot property in government, despite the downsizing trend.

"IS professionals are normally at a pretty high pay grade," and they can also take advantage of several cash award programs ranging from performance appraisals to "beneficial idea" programs, he says. However, Erwin adds, the 93 IS employees in his division are more interested in training and job mobility than in money. "Our employees get more training on average than most people," he says, "and they are experienced to work on a lot of different types of things."

Government IS employees also have one large advantage over their peers in the private sector: the ability to change jobs and retain their benefits.

Erwin estimates that the average IS staffer in his department has worked at several government agencies in a seven- to 10-year career.

Senior government IS staffers who get restless can also take advantage of sabbatical programs and private-sector exchange programs. The sabbatical programs usually take the form of temporary teaching positions. The private-sector exchange program lets an executive work in a corporate IS setting for one year.

But of all the benefits a company can offer an IS employee, the most critical is a sense of long-term job security, Erwin says. "People are just concerned about their future and their role in the future." ●

Illustration by Mark Fowler

Weldon is a Computerworld *associate editor, Management.*

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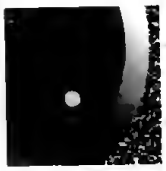

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Turning diversity into

Facing concerns

about equality and a changing demographic profile indicating that women and minorities will be an increasing part of the labor pool, information systems organizations are re-examining the issue of staff diversity.

Traditionally dominated by white males, IS is becoming increasingly open to various racial and ethnic groups and women in midlevel positions. The following organizations exemplify this trend.

UNIVERSITY OF MIAMI

As a private, not-for-profit organization, the University of Miami has an active affirmative-action program. The school depends on its diversified community of students, faculty members and donors for gifts and grants.

"We take this stuff very seriously," says Lewis Temares, vice president of information resources and dean at the College of Engineering. "We have a responsibility to set an example of making diversity work."

Temares advises IS managers looking to hire minorities and/or women not to do so unilaterally. "You have to get other people on board. Work with human resources people. And you must get a commitment from the top. When high-ranking people are dedicated to achieving diversity, this philosophy spreads throughout the organization."

This organizationwide atmosphere helps attract and retain qualified people. "They know that there is a commitment to equality, and people are hired and promoted on ability, not on politics," Temares says.

Actively courting women and minority candidates exposes IS to its choice of attractive applicants. "Because other people are not paying attention to minorities, we have a fabulous pool of candidates," he says.

SOUTHERN PACIFIC RAILROAD

"We don't have quotas; we just get people who can do the job," says Roy Carlson, Southern Pacific's vice president of management services.

Based in the San Francisco Bay area, Southern Pacific's staff diversity owes a lot to the region's tradition as a melting pot. Its two largest minority groups are Hispanics and Asians.

Southern Pacific's IS group hired its first female employee in 1963, and within three years, nearly half the staffers were women. Women now hold about one-third of the supervisory positions.

And now that the IS group is known to be receptive to women and minorities, a lot of recruiting is done by word of mouth. "Once you have a seed population," Carlson says, "they tell their brothers and aunts and neighbors."

CONSUMER PRODUCT SAFETY COMMISSION

"The face of the work force has completely changed," says Otto Hall, director of information resources management at the Consumer Product Safety Commission. "Women are flooding into IS throughout the government."

Attracting qualified women has been relatively easy. The IS department has seen little evidence of the well-publicized lack of women pursuing studies in science and math.

"I was surprised to hear women weren't doing well in those subjects in school," Hall says. "The women we see are dynamite: They come fully prepared, are self-starters, very eager.

The University of Miami is dedicated to achieving diversity among its employees, a philosophy that it has clearly implemented

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an advantage

By Melanie Menagh

Many have been turned down elsewhere . . . so we see the cream of the crop."

Recruiting qualified minority staff has been harder. "It can be tough to attract African Americans, Hispanics and Asians. There is more money in the private sector, and they're looking for minority employees," Hall says.

Yet there's still a preponderance of white men in middle and upper management; with the uncertain economy, people are holding on to their jobs. But that, too, may be changing.

"The Clinton administration is looking to cut 272,000 jobs, mostly with middle management buyouts," Hall says. "This will make room for younger workers."

And among these younger people are greater percentages of women and minority workers. "In work force 2000," Hall says, "multiculturalism and diversity will be a fact of life."

AST RESEARCH, INC.

AST, one of the world's largest PC makers, was founded by three minority immigrants: two Chinese and one Pakistani. As a result, cultural diversity has been part of the firm's philosophy from the beginning.

For an international firm, hiring a variety of people is a must. "More than half our business is outside this country," says Richard Diamond, AST's vice president for worldwide IS. "If we get too U.S.-centric, we're going to lose out. We need people with b language capabilities and cultural acuity."

Companies interested in increasing the diversity of their IS staff need to be proactive, Diamond says. "If you keep going to the same traditional channels, you'll get the same people. You have to find out where the alternate streams are," he explains. "You need to identify women's professional organizations, for instance, and make them aware of job opportunities."

FEDERAL MARITIME COMMISSION

Doris Spencer, an African American and director of the office of information resources management at the Federal Maritime Commission, began her career in the federal government in 1958 as a keypunch operator.

"In those days, I was working in a sub-subbasement at the Department of Agriculture, when blacks had to sit in a separate section," Spencer says.

She became one of the first women to head a systems software group. Thus, she says, "I have made it a point whenever possible to recruit minorities. They have always worked fantastically well, and I'm a hard taskmaster."

"More women and minorities are now entering IS because of a change in education as much as attitude. Women and minorities were not aware of the opportunities available in this field," Spencer adds.

To ensure that women and minorities are represented in the ranks, the top brass' proactivity must be tracked.

"Senior management needs to be held accountable," Spencer says. "It's one thing to institute diversity programs, but if senior management isn't actively supporting it, you might as well do nothing. The old boy network is alive and well; you need an independent monitoring system to hold them accountable for changes."

Menagh is a free-lance writer based in New York.

in its IS department, pictured below

Newcomers expectations and challenges

IS professionals come in many shapes and sizes and with different levels of experience. In the best companies and organizations, college hires mix with veterans to provide a staff that has the enthusiasm of youth seasoned with the right amount of know-how and understanding. Hiring trends are about even these days, with 28% of the more than 600 organizations we surveyed heavily hiring newcomers and 20% placing the emphasis on information systems professionals with prior related experience. To reflect this balance and the differing views of the two groups, we present these professional profiles.

MICHELE CHOCHOLEK

Systems analyst, JM Co
26 years old. More than two years in IS. BS in
ance, Indiana School of Business, MBA concen
ating in MIS, Carlson School of Management

Alex Upton

Why a career in IS: "Three primary reasons are the ability to provide technology solutions to business problems, the dynamic nature of technology and the need for a communications link between business professionals and technology professionals."

Rewards: "The greatest reward has been witnessing the application of technology to solve a problem, more than just applying technology for the sake of technology. Sometimes technology is the solution, sometimes it is only part."

Challenges: "The toughest thing for me is understanding the business needs without having done the job. It requires learning to ask the right questions of the right people. Another challenge is understanding the true capabilities of a technology."

Youth vs. experience: "The advantages of youth are fresh ideas and new perspectives. Young IS professionals are more open to new concepts. The advantages of experience are exposure to more technology and applications, as well as an appreciation for how technology has changed the way business is done."

Figure in the computer industry you'd like to be: "I would want to be a technology guru – a sort of J. Edward Deming of IS. There is great potential out there for improving how business is done. I'd like more exposure to business issues and technologies so I could develop a technology framework for the business world."

New technology you would invent: "In many cases, systems cannot easily work together and share information. My dream technology would easily link all the wonderful systems and tools that both large and small companies use."

Where IS will be in 10 years and where you will be: "IS is emerging from a back-office support function to a driving force in the business world, yet it is still far from being a major player. In the next 10 years, I think IS will hold its own in the marketing, finance, production and functional areas of today. IS will more directly shape the direction of the business world. I see myself involved with IS, however, since I'm a business-oriented person, I see myself in a role that is more involved with strategic planning, applying the functional abilities of IS, finance and production."

DORIS R. ESCOTO

Sen[illegible] Travelers Corp.
[illegible] years in IS.
BS, BA in computer informa-
tion systems, Bryant C[illegible]

Bill O'Connell

Why a career in IS: "The primary factor was my interest in computers."

Rewards: "The greatest is my involvement with the Accent program, a leadership program within the IS division at The Travelers consisting of five rotations in different areas of the company. Each rotation emphasizes a different skill set, from task management to project management, in order to develop leaders or 'change agents' to lead IS departments in the future. Accent allowed me the flexibility I was looking for and exposes me to senior management, giving me an opportunity to voice my opinions."

Challenges: "Adapting to office politics and bureaucracy. It's frustrating to have to delay completing an assignment due to someone else's schedule or because I had not consulted all the right people. It's less of a problem now, due to 'rightsizing.' Today, I have fewer layers to go through to get to the decision maker."

Youth vs. experience: "The advantage of being young is being more flexible to change due to not knowing how things used to be."

Figure in the computer industry you'd like to be: "Don't have one."

New technology you'd like to invent: "A system tracking application using Lotus' Notes. We have some great minds at work, but due to a lack of communication within IS divisions, the wheel keeps getting reinvented. The application would define systems developed at The Travelers, listing what technology was used to meet what need, who the developers were and the system's process charts."

Where IS will be in 10 years and where you will be: "In 10 years, I will be a primary decision maker within a business division, a technical director or consultant."

DONALD L. THIE

Katherine Lambert

Why a career in IS: "Working with computers is more like being paid for a hobby that you enjoy. Professionally, I have been lucky to work with computers in federal agencies with important public service functions, including the Air Force, Defense Intelligence Agency, Environmental Protection Agency, U.S. Information Agency and the National Park Service."

Rewards: "Having had the chance to have a part in supporting our country's leaders in solving critical foreign policy and environmental problems from the '70s 'til today."

Challenges: "My wife will tell you my greatest personal mistake is not making enough money as a public servant."

Youth vs. experience: "During my youth in the '70s, I could work 18 hours a day and still get out of bed the next day. My greatest advantage now is that I know how to avoid that 18-hour-a-day requirement."

Figure in the computer industry you'd like to be: "I'd choose Harman Holerith, the person who worked at the Department of Commerce in the late 1800s. He applied punch card technology to the U.S. Census and got a large share of the federal budget for automation." [Editor's note: Harmon Holerith automated the tabulation of the U.S. Census for the first time and invented punch card technology along the way.]

New technology you'd like to invent: "We need far more data on the condition of the natural and cultural resources in the national parks in order to protect these resources from unwanted change. I would like to develop an artificial intelligence image scanning of photos which could detect changes in an area."

Where IS will be in 10 years and where you will be: "Parallel processing and artificial intelligence technology will somehow interact to form new systems processes. Ten years from now is my projected retirement date. I should have my second child [now in high school] through college by then, I hope!"

MARK D. QUINLAN

Joanna Pinkney

Why a career in IS: "I was attracted to IS because of the challenges, opportunity for creativity and also because it was a growing field. It's also something that I am good at."

Rewards: "The greatest rewards I have experienced are from having a positive impact on business and on people's jobs."

Challenges: "Two things: communicating the strategic changes necessary to support the move toward distributed computing and balancing my personal and professional lives."

Youth vs. experience: "Youth has the advantages of high energy and the belief that anything is possible. Experience brings with it knowledge of people and politics, knowing how to get things done."

Figure in the computer industry you'd like to be: "IBM Chairman Louis Gerstner. He has a once-in-a-lifetime opportunity to change the culture and operations of one of the greatest U.S. corporations. This will also impact the IS industry for a generation or more to come."

New technology you would invent: "I'd like to build an educational program to improve how our kids are taught. This would include improving literacy and math skills."

Where IS will be in 10 years and where you will be: "I see a breakdown of the barriers between IS and the business. Technology is just a tool to support the business, not an end in itself. I see myself as a senior manager of a business unit."

BY MELANIE MENAGH, A FREE-LANCE WRITER BASED IN NEW YORK

What experienced IS workers care about

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MICROSOFT'S

Chris Gibbons

Chris Gibbons is CIO of Microsoft Corp. in Redmond, Wash. He was interviewed by Leslie Goff, a free-lance writer based in New York.

Microsoft's Gibbons places a premium on empowerment

Raymond Gehman

BEST PLACES: How is a high-growth/high-change environment hard to manage from a staffing perspective?

GIBBONS: It's the nature of the high-energy environment that exists in Microsoft that keeps staff motivated and dedicated. . . . There's clearly difficulty keeping them stimulated and focused because their interests range widely. The techniques we use to manage the staff revolve around communication, spending time making sure employees understand business issues and changes; involvement of employees in decision processes through workgroups and task forces; and giving them the opportunity to learn and develop with new technologies.

BEST PLACES: In an enviroment in which you're constantly adopting new technologies, how do you keep staff from burning out?

GIBBONS: One way is to empower the employees, allowing them to set goals and measure their own success. Another is to be flexible in the roles that are given the employees in the team environment, allowing them to move between roles from project to project so they are not classified as a certain kind of title.

We also spend a lot of face-to-face time with employees in one-on-one meetings. We ensure that we air problems and frustrations and develop solutions that are very visible to the employee group as a whole.

BEST PLACES: Of all the staff management techniques you've used, which help the most in this kind of high-growth/high-change environment?

GIBBONS: It really comes down to empowerment. Management [sets] the boundaries and rules within the organization, defines the roles and responsibilities and gives these people the tools and knowledge to carry out their responsibilities.

BEST PLACES: How do you communicate that authority to a new employee?

GIBBONS: We have in process now an Information Technology Group 101 course, which goes through and describes the various aspects of the company's culture. As people know more and more that they are empowered, they convince [others] that they are empowered. So part of it's a cultural thing, as well as formal communication. The last thing is to gain feedback and measure the success of how well people are doing, to constantly be telling them the things they're doing well and the things that they aren't and to help them figure out ways to improve.

A lot of that happens in one-on-one sessions. We have a mandate in ITG that every employee has a one-on-one with their manager at least once every two weeks. The agenda of the one-on-one is the employee's, not their manager's. So it becomes a time for the employee to give quality feedback to their manager, to request quality feedback and to ask for [resolution] of problems.

BEST PLACES: What techniques have proved to be bad ideas?

GIBBONS: An attempt to create ownership of ITG human resources within specific functional groups. That is, there might be a group of people working on manufacturing and a group on finance, etc. In a world where technology is very stable, those workgroups and the skill sets of the individuals are also stable. And it's relatively easy to maintain the right types of people within those fixed workgroups.

As technology and business needs begin to change very rapidly, we found the need to significantly reshape that. [There are fewer] people dedicated to the business units themselves, with a wide variety of other skills being matrixed onto the project teams as required. We had to reverse the notion of strong concentration of resources and move to a more flexible, pooled environment.

And that's all specifically due to times of rapid change. You have to create scalable and flexible organizations to keep pace with change.

FACE ♀ FACE

EFFECTIVENESS IS BASED ON THE TIME SPENT SERVING TOP MANAGEMENT

The best work environments for IS professionals can be found, not surprisingly, in healthy companies. The key to whether IS is thriving at such companies is how well the organization has integrated its mission with achieving its business goals. While this is no revelation for information systems professionals, best practices in achieving that integration may have more to do with people and staffing issues than with strategy.

By Jennifer deJong

Driven by such goals as improving customer service, cutting time to market, increasing market share and reducing the rate of errors, successful IS organizations do more than match business needs with systems initiatives — they embrace work styles that reflect the company's larger business culture.

It doesn't matter how many metrics you use to measure financial success: If management doesn't know what you are working on, you're in trouble. Letting the boss know both formally and informally what you are doing for him is important at the executive level as well as within IS. Ask him what he needs, and find out how often he would like to meet.

IN THE LOOP AT PEPSICO

David Kaufman, director of IS at Pepsico, Inc. in Rolling Meadows, Ill., had no trouble getting the boss' attention when he and his staff developed a financial application that consolidated numbers from all the firm's operating divisions worldwide. Because the system is used to report to senior management and to the Securities and Exchange Commission, it wasn't hard for him to get on the boss' radar screen. His input was critical.

The IS organization switched from mainframe systems that produced paper reports to on-line client/server systems for some of its applications. The change allows executives direct access to the financial information. Suddenly, the managers cared much more about how the system worked because they had hands-on use of it.

"Back-office systems didn't affect management," Kaufman says. "In the old days, you didn't need to let the boss know that the mainframe general ledger system was working just fine."

Robert Neubecker

Senior managers at Pepsico like using the new client/server financial application that runs on PCs because it spares them the cumbersome task of reviewing the paper-based reports.

Better still, it gave Kaufman the opportunity to prove how new technology can save money. The application that once required day-to-day management from seven workers now requires the services of only four. (The remaining three were redeployed at other tasks.)

That savings bodes well for Pepsico — and for Kaufman, who says his goal is to help the firm maintain costs as it adds employees. As a major player in the labor-intensive restaurant business, Pepsico expects its number of employees to reach 1 million by the year 2000. Most of them will work in the Pizza Huts, Taco Bells, Kentucky Fried Chickens and other restaurants owned by the $25 billion firm.

MEETING SALES DEMANDS

Another IS organization that is tied closely to its company's business success is Ortho-McNeil Pharmaceutical, where IS professionals are in high demand. Computer systems are especially important to the sales and marketing staffs at the Raritan, N.J., subsidiary of Johnson & Johnson. These users are demanding updated applications to keep up with changing market demographics.

They need systems that reflect the major shift occurring in their business. Today, the primary customers for the women's health care products and antibiotics that Or-

tho-McNeil makes are health maintenance organizations, not private doctor's offices.

As manager of an IS staff of just 12, Mike O'Cone cannot meet all the marketing and sales demands at once. So to determine priority and avoid an uproar, O'Cone formed a steering committee to make the decision for him. The committee is made up of directors and managers from the four lines of business he serves, as well as members of the IS staff.

The committee, which never numbers more than 10, looks first at the company's business objectives and then at the conflicting requests for service. Which request, when met, will best further a business goal? In the process of making that decision, the members come to view the business from a wider angle than their day-to-day jobs typically afford.

"It has a coattail effect," O'Cone says. "They end up asking, 'How can I get involved?' even when their own request has been denied."

This approach has also prevented the creation of redundant programs and has enabled different lines of business to share core applications.

FACE-TO-FACE CULTURE

While steering committees work for some companies, one-on-one contact works for others.

Perhaps the ultimate example of that is McDonald's Corp. When Ray Krock, who founded McDonald's in the mid-1950s, wanted to know how the operators of his hamburger joints were getting on, he would pick up the phone and ask them. He could — and often did — visit all of them in less than a year. But today, with more than 14,000 stores in 71 countries, that's not so easy.

Still, the face-to-face way of doing business dominates the culture of the $26 billion Oak Brook, Ill., firm, which built its relationship with its suppliers on the basis of a single handshake.

Mike Disabato, manager of strategic planning for the network, finds it useful to keep that business culture in mind. It helps him formulate the white papers and business cases he uses to convince upper management of the value of technology.

For instance, when writing a white paper on videoconferencing technology, he might point out that its adoption would increase the face-to-face contact among users that McDonald's management deems so important. "I would never mention bits and bytes," Disabato says.

Instead, he points out which of the firm's competitors use

TOP TEN

These companies have had the highest return to stockholders

- AT&T Corp.
- The Coca-Cola Co.
- The Home Depot, Inc.
- Johnson & Johnson
- McDonald s Corp.
- Merck & Co.
- Microsoft Corp.
- 3M Co.
- Pepsico, Inc.
- Wal-Mart Stores, Inc.

Source: Best Places to Work Survey

Management Information Systems

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- **Databases:** SYBASE, Ingres, ALLBASE, Image
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- **Operating Systems:** UNIX, OS/400, MPE, DOS, Windows, Banyan Vines

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videoconferencing and explains to what end. Once he has engaged management's interest and the boss has given the go-ahead, he builds what the firm calls a business case. This document gets down to the nitty-gritty, citing the specific costs and business benefits of the technology in question.

For example, in making a case for wireless LANs, Disahato would note that the field restaurant consultants who help the store managers with anything from training to financials to maintaining McDonald's image need a simple way to tap into data and report back to headquarters.

"When a restaurant is under construction, there are no phone lines to plug into. Even [once the phones have been installed], there's a certain anxiety about hogging the lines," Disahato says.

COMMON SENSE DEALINGS

Providing payoff isn't always a matter of technology.

George Sekely, president of CSX Technology, Inc. in Jacksonville, Fla., which serves the $10 billion CSX Corp., reduced technology expenditures from $200 million to $150 million a year, chiefly by renegotiating hardware and telecommunications service contracts.

But he says the bottom line for his dealings with top management is a matter of common sense. Asked about face-to-face contact with the chief executive officer to whom he reports, Sekely says, "Never ask a boss to do anything you would do yourself. That's a death sentence."

These examples show the importance of understanding top management's attitudes and the need to get their attention through systems projects that affect them.

While IS organizations receiving strong management support in economically healthy companies are good at managing these areas, they also know how to illustrate cost savings and revenue generation through IS projects. The more payback management sees financially, culturally and through first-hand experience, the easier it will be to gain sponsorship for systems initiatives. ◆

DeJong is a free-lance writer based in Boston.

Continental Grain, a $20 billion futures and grain storage and transport company, is a good example of earning management's support through a team approach.

Undaunted by management's resistance to moving to client/server, project leader Roger Rudenstein took the initiative to make the move happen.

In his spare time, he formed a team that was able to cost-justify the switch and adopt a plan to run both the new system and the mainframe human resources system simultaneously, until all the kinks were worked out of the new system.

The new system, including the RISC-based Hewlett-Packard Co. HP/9000 on which it runs, cost about $200,000.

Rudenstein can't say for sure whether management will pull the plug on the mainframe. But as a measure of his success, he says, the HP/9000 is now viewed by management as the platform for mission-critical applications.

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Dennis Jones

Dennis Jones is CIO of Federal Express Corp. in Memphis. He was interviewed about overall staffing strategies by Leslie Goff, a free-lance writer based in New York.

Fedex s Dennis Jones bases staffing policy on people

Patrick Murphy-Racey

BEST PLACES: How do you successfully obtain and manage employees in the IS workplace?

JONES: We're based on a strong foundation of three tenets — people, service, profit — which provide tbe philosophical framework for the company. We believe that if we treat our people fairly, they will provide superior service for our customers, and that will result in n profit for shareholders.

BEST PLACES: How do you indoctrinate new hires into tbe company philosophy of people, service, profit?

JONES: We have a six-week new bire training curriculum in tbe [information tecbnology] group that is built around the people, service, profit foundation. Tbe intent of tbe course is to ensure that they understand the culture. It's not just something that's talked about or toucbed upon — we expect them to be infused with that culture when the course is completed

BEST PLACES: How hnve Federal Express' corporate policies — guaranteed fair treatment, minority recruitment and no layoffs — contributed to the shaping and morale of the IS staff?

JONES: I think tbey hnve allowed us to manage through cbange witbout fear . . . to remove [fear] as a barrier to change. That's not to imply that there aren't questions and concerns, but there's a difference between having questions and concerns and the fear that you're going to be n personal victim of tbe change.

BEST PLACES: What specific role has the minority recruitment policy played in IS staffing?

JONES: That is very important for us. A broad-based work force further adds to a challenging and inspired work environment. It has an influence on [how we choose] the colleges where we recruit. One of the factors that we consider on our college recruiting list is wbether [tbe college] can provide us with a broad base [of potential] employees.

BEST PLACES: What about the no-layoff policy?

JONES: I think it has been very helpful as a working practice tbe company has had, from a philosophical standpoint. We have gone through tbis enormous sea change in moving from a mainframe to a client/server environment, and that hns been very helpful in ensuring that fear doesn't find its wny into making these changes.

Most people say, "What's in it for me?" And what offen happens is that leads to the worst conclusion: that they're going to lose their job. But if you start out with tbe philosophical basis that you're going to retain your work force and you're going to train your people, then people can manage through the cbange.

Now that doesn't mean everyone remains in the same joh they had previously. Wnat it means is they have the opportunity to continue to contribute, to be a challenged working member of the team.

BEST PLACES: What other relevant staffing policies does Federal Express have in place?

JONES: We fill no job from the outside witbout the job being posted first within the company. We have an incentive program that is based on your personal performance, as well as how well the company does. We bave a merit-based program . . . [in which] all employees can receive a merit increase in their pay range every 12 montbs, and it's based on personal performance. . . . We bave a rewards program for high performers called the Star/Superstar Program. They can earn added compensation if they fall into that category.

BEST PLACES: What types of key personal skills do you look for?

JONES: That [employees] demonstrate sensitivity to the needs of a customer; that they could work in a team environment; and that they have skills in which they can grow because we want employees to take advantage nf our policies and grow with the company.

Knowing how big the ears of corn are in Iowa can be critical to up-to-the-minute decision-making

IS keeps growing

Close ties between IS and crucial business needs keep staffs healthy

by alan r. earls

The scenario is by now familiar. The dark eye of suspicion falls on costly, high-profile IS operations. What exactly do all those people do, the cost cutters ask? Too often, IS pros lack sufficiently convincing answers. After they survive a first modest paring, they find the corporate budget cutters are now coming back for more.

While this has been the story for many information systems organizations in recent years, some are still growing almost as fast as in the boom years. The reasons for their continued success are as varied as the firms they are part of, but the common thread seems to be achieving a significant degree of strategic recognition within their companies.

Tracking missiles parts and proposals falls to the U.S. Arms Control and Disarmament Agency's growing IS staff

For some of those organizations still growing strong, IS is in fact the central focus of the company. In such cases, IS professionals have had to provide exceptional levels of leadership. Other organizations have had to continually push to keep IS at the top of the agenda and have done so by delivering bottom-line results.

Whatever the case, the firms profiled here provide a good indication of what it takes in the 1990s to keep an IS engine operating at peak form and how to ensure that its merits are recognized and rewarded.

FRONT AND CENTER

Take IS talent, sprinkle liberally with venture capital, and what do you get? The answer is Fiserv, Inc. During the past 10 years, Fiserv has carved itself a large share of the market for IS services in the banking and financial services arena.

Indeed, according to Jack P. Bucalow, human resources senior vice president, the Brookfield, Wis.-based firm is now the leading independent full service data processing company for the industry sector.

Since information processing is the firm's core activity, it is no surprise that IS has grown along with the firm. But Bucalow says a certain IS culture has helped contribute to growth as well. "Fiserv has a well-publicized, clearly articulated vision and mission statement; everyone knows what we are doing and where we are going," he says.

"We see three core strengths in our operations," Bucalow adds. "We all believe the client comes first, we say and believe that people make the difference in our business, and we maintain a sound financial position with a strong balance sheet."

He says IS has been able to demonstrate its ability to deliver quality service to banks much more cost-effectively than banks themselves can provide it. "For larger banks, we still must go head-to-head with their internal IS capabilities," Bucalow says. "For smaller banks, on the other hand,

the decision has usually been made already to outsource, so we must compete with other vendors."

That may explain why IS has continued to grow not just from expanded demand but also through acquisition. Bucalow notes that sales grew from $183 million in 1990 to $455 million in 1993. "We are hoping to reach $1 billion in a few years, but some of our growth will come from acquisitions," he says. Some of the acquisitions will be independent vendors, and some will be departments spun out of client institutions, he explains.

GUIDED GROWTH

Keeping track of MIRVs, SRBs, ICBMs and SLBMs under the auspices of HALT, SALT, INF and a host of other agreements is the job of the U.S. Arms Control and Disarmament Agency. Keeping track of all the missiles, parts and proposals covered by those agreements is up to the agency's IS organization.

"Unlike some defense-related activities, our mission isn't shrinking—it's growing," says Ed Lesko, director of information management. The agency's IS staff grew 7% last year, with a budget of $60 million.

To meet the challenges of increased disarmament activity, the agency has a request for proposals for contractors to supplement its computer operations staff.

The agency maintains on-line access to arms treaty data at its Washington headquarters. IS also supports sites in Geneva and The Hague.

TOP TEN

These organizations are growing their IS staffs at a consistently strong rate, higher than industry averages

- AST Research, Inc.
- Fiserv, Inc.
- Metropolitan Life Insurance Co.
- Pepsico, Inc.
- Stanford University
- State of Texas
- U.S. Arms Control and Disarmament Agency
- U.S. Department of Agriculture
- U.S. Office of Management and Budget
- University of Miami

Source: Best Places to Work Survey

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BEAN COUNTING

The U.S. Department of Agriculture (USDA) is in the midst of implementing a national wide-area network for its marketing services, and it is adding technology and people to get the job done.

The network, which includes the deployment of frame-relay systems, is reducing costs per transaction while increasing transmission capacity.

"Our mission," says Mary Ellen Condon, director of information resources management for the Agricultural Marketing Service of the USDA, "is to provide data through our regional offices to people in the industry who pay for the information."

And in agriculture, knowing how big the ears of corn are in Iowa or how tasty the crop of apples is in Washington can be crucial to minute-by-minute decision-making. Literally everything from prices to pesticides hinges on such information.

LONE STAR RISING

How would you like to try building a client/server network as big as the state of Texas? That's just one of the projects coming down the pike at the Texas Department of Transportation.

Alex Harrison, the automation administrator in El Paso, one of several major data centers in the state, explains that each data center has considerable fiscal autonomy. "We are all driven by a commitment to get a very fast LAN operating by Oct. 31," he says.

That commitment recently helped ensure continued growth within the department. "In my own regional division there are 349 people," Harrison says. "Some 10% are actual IS professionals, and more than half are IS users."

For the IS professionals, there is plenty to do — more work than people to do it, according to Harrison.

Ensuring that users are able to make the most of their PCs is part of it. The balance is comprised of work on the LAN. Next year, Harrison says, the focus will shift to implementing client/server architecture across the board. ◆

Earls is a free-lance writer based in Franklin, Mass.

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23 Dir./Mgr. Sys. Development, Sys Architecture
31 Programming Management, Software Developers
41 Engineering, Scientific, R&D, Tech. Mgr.
60 Sys. Integrators/VARs/ Consulting Mgr.

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11 President, Owner/Partner - General Mgr.
12 Vice President, Asst. VP
13 Treasurer/ Controller, Financial Officer

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(d) Unix (h) NeXTstep

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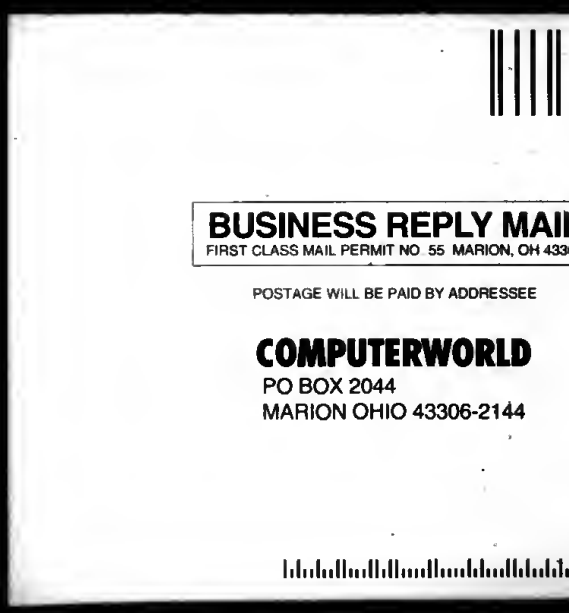

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TURNOVER

Treating people right

FIRMS CLOSE THE REVOLVING DOOR

Cliff Woodruff says a creative IS environment and perks such as free tuition keep IS turnover low at Tulane University

It takes more than the economy to keep employees at their desks. Managers of low-turnover organizations say other factors build loyalty in both good times and bad.

The human resources manager at a large New York bank who declined to be interviewed for this story says her reason for staying silent is that "this is a bad time. If I say anything about any policies we have that contribute to low turnover, my people will laugh at me." She adds, "They all believe it's just the economy."

And while information systems job cuts have left many talented people on the streets and many others reluctant to risk a change, some managers insist there are other factors essential to keeping turnover low and morale high.

by alan r. earls

Indeed, they say, relying on external conditions to keep turnover low is a formula for disaster long term and a source of potential trouble in the meantime.

FOOD FOR THOUGHT

John Androski, director of central systems at CPC International, Inc., an Englewood Cliffs, N.J.-based food processing firm, acknowledges that times are tough. "There is no doubt the jobs are not as plentiful as they were in years past," he says. "There was a time when IS was a revolving door. People would spend 18 months or two years if you were lucky before they would move on to another employer."

The tendency was exacerbated, he says, by the number of "headhunters" attracted to the industry because of its high salaries and continued growth. And while Androski notes that the downturn has been especially severe in the metropolitan New York area, he says colleagues across the country tell him the situation is similar there.

Nonetheless, he says it is still crucial to treat people right. "We start with a good benefit package," Androski says. "We also do a number of other things to promote job satisfaction, including

providing good pay."

Not to be overlooked is "having a clear, well-focused objective for the IS department," he says. "People need to know that what they do is important and how it fits with other things."

Androski's tough times philosophy has paid off for CPC so far. "Out of 75 people in our department, I think we've only turned over two in the last two years."

IS ON THE FRONT LINES

John B. Smart Jr., vice president for IS at Houston-based Sysco, Inc., puts a different face on the turnover question. "We are the unequivocal leader in the food service industry because of two things: our people and our service," he says. "We do everything possible to select the right people who can be good members of our employee community."

Part of that selection process includes putting new IS recruits through a sort of IS "fire walk."

"One of the key parts of our training process is having our people spend at least a few weeks working out in Sysco's field operations," Smart explains. "They do everything from loading trucks to delivering groceries to riding with salesmen. "Our real IS stars," he continues, "are the ones who create a love affair with what our company does."

In return for fealty to corporate goals, Smart says, IS people are "treated like professionals, not like technicians." Indeed, he says, IS staffers are part of every customer contract, as well as part of strategic planning for the business. "When we negotiate con-

TOP TEN

These organizations have the lowest turnover rates in their industries

- Ameritech Corp.
- Carolina Freight Corp.
- CPC International, Inc.
- Purdue University
- Southland Corp.
- Sysco Corp.
- Tulane University
- U.S. Department of Treasury
- University of Colorado
- University of Nebraska

Source: Best Places to Work Survey

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tracts and win bids, there is always a systems implication," he says.

At present, Sysco has a mainframe-based organization, Smart says. In the last two to three years, the focus has been on rewriting many applicatioos for an AS/400 environiment, which will he fully implemented during the next few years.

TULANE'S INFORMATION HIGHWAY

Although the New Orleaos area has been through a shakeout as fierce as any, Cliff Woodruff, a vice president at Tulane University, says his biggest asset in controlling turoover is the attraction of an academic environment.

"New Orleans has seen a lot of companies moving home offices to places like Dallas and Houston," Woodruff says. "We ourselves even had to trim staff some 18 months ago." Now, however, IS is in the driver's seat at Tulane as the university poiots toward the year 2000. "One of the five areas our president has identified as key for Tulane is information technology, so overall we have considerable support for what we do," Woodruff says.

"The administrative side is like any other business, with accounting functions oceded to run a 4,000-person payroll," he notes. Supporting such hasic functioris is a traditional IBM MVS shop. Beyond that, though, there is a mix of technologies ranging from microwave data links to hundreds of PCs and even a large parallel processor.

And while the school no longer keeps the data center fully staffed seveo days a week, there are numerous growth areas ahead. "We are doing really creative thiogs with multimedia and distance learning," he explains.

And that's the heart of Tulane's ability to keep its professional staff. "If you look into any university, it turns out they are really attractive places to work," Woodruff says. "A more typical computer shop runs the same programs every night and concentrates on pushing their hardware to the hilt. We have the ability to let people try creative new things, and we also offer outstanding benefits, like free tuition for staff and family." ●

Earls is a free-lance writer based in Franklin, Mass.

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Senior Development Advisor

If you want to provide architecture, design and implementation services, keep reading. You should have: 7-10 years directly related experience with client/server technology; programming/working experience in multiple network management platforms (HP OpenView and IBM NetView/6000); and a thorough understanding of UNIX, C, C++, X/Motif, TCP/IP and SNMP. Your background in Vieix/Galaxy, Peerlogic/Pipes, Tivoli/TME, OOD&P, RDBMSs, GUI builders and CORBA is a definte advantage. Dept. CCP/SDA.

Senior Developer/Develpor

How does designing, prototyping, implementing and testing our management platform sound to you? Here a what you'll need: 5-10 years of directly related experience; strong technical and development skills; a thorough understanding of UNIX, C, C++; X/Motif, TCP/IP, and SNMP. Experience with multiple network management platforms (HP OpenView and IBM NetView/6000) is a plus. Dept. CCP/SDD.

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LOWE'S

CIO

GENERAL SERVICES ADMINISTRATION'S

Frank McDonough

Frank McDonough is the assistant commissioner of Federal Information Resources Management at the General Services Administration. He was interviewed about making staff investments pay off by Leslie Goff, a free-lance writer based in New York.

The GSA's McDonough uses a Trail Boss program to reduce turnover.

Katherine Lambert

BEST PLACES: What types of investments do you make in staff development and retention?

MCDONOUGH: We develop what we call an Individual Development Plan for each employee each year. We try to figure out where the employee is and where, with help, that employee might be a year from now and in the future. We try to take their thoughts into consideration . . . and we track it. We follow through and try to make sure those plans are followed.

One of the things that contributes a lot to staff retention is the Compressed Work Schedule program — you can work longer for nine days and have a tenth day off. With busy families these days, if you can get one day off every two weeks, you can almost survive.

[We also] have a lot of activity now in telecommuting. . . . We have centers in four cities [in the Washington metropolitan area], and the idea is you can go there and work instead of commuting all the way to Washington.

BEST PLACES: What is the Trail Boss program?

MCDONOUGH: The Trail Boss program is [focused on teaching] people what they need to know to manage a $100 million-and-up systems acquisition: What do you need to know when Congress starts asking questions about it? How do you need to sell it at the [Office of Management and Budget]? What do you need to do when you come to the GSA to get procurement authority? What are the latest governmentwide policies that could affect a major acquisition?

We have Trail Boss I for people responsible for developing requirements and managing a major acquisition up to award; II for people who will manage big systems after they're awarded; and III for contracting officers involved in major systems.

BEST PLACES: Has there been a payoff with regard to retention?

MCDONOUGH: [Employees] take real pride in being a Trail Boss graduate and in their ability to do these very difficult jobs. I had thought in 1988 that Trail Bosses would move into other fields or retire at the rate of about 10% per year. It has not been that high. For the first few years it was around 2%. We may be in an unusual period right now, so that may be why it's so low. The recession tends to affect turnover within the government.

BEST PLACES: What are your key motivators, and how do they contribute to staff retention?

MCDONOUGH: We brainstorm on issues we're facing to use the collective wisdom in the heads of the staff that I have. We've spent a lot of time on team building, quality management, empowering and pushing work down. I think all those things help.

Is everybody 100% happy? No, but to me the most important thing here is the nature of the work. People know that the work we do is big league stuff. We have had some people leave us for other jobs, and they come back later and say, "There are frustrations here, but the work itself is so interesting and meaningful that I wanted to come back." ●

Cooperative goal-setting makes the difference

by lance b. eliot

You can lead IS pros to the well, but you cannot make them drink unless they have incentive to do so. Hunger for money, peer recognition, job advancement and perks are found in most information systems professionals. Top IS organizations use smart performance programs to produce top results by tapping into the inherent cravings of IS staffers.

If you have a confusing measurement system for evaluating IS performers or lack a credible means to gauge performance, the result is likely to allow lazy IS professionals to remain lazy and generate frustration and anger in potentially good performers. Make your system explicit, make it sensible, and implement it properly.

The following highlights of top IS organizations illustrate that there must be a clear tie between IS activities, overall business goals and the specific performances of individuals in IS.

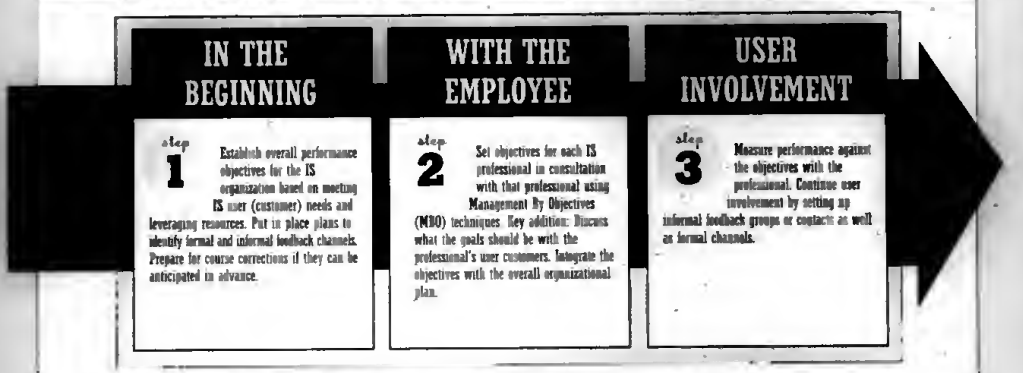
These companies report that they have intense employee loyalty, lower turnover and higher productivity, all of which they feel can be credited to their performance programs.

If your organization is losing IS staffers right and left, cannot find an IS specialist for occasional weekend duty and merely lets IS staffers mindlessly clock in and out each day, odds are that an overhaul of your performance program is needed. [illegible] people do as they are measured.

PERFORMANCE: GOOD FOR THE HEART

At American Medical International, Inc., the measurement of IS professionals is taken as seriously as any medical procedure. "We set specific objectives, using a variation of the Management By Objectives (MBO) technique," says Steve Brown, director of IS. "And we evaluate the employee to see if the objectives were met."

Setting the right objectives is key to a traditional MBO approach, Brown says. He not only identifies objectives by having discussions with the tar-



geted IS staffer but also meets with hospital administrators (IS users) to translate business goals into IS goals.

Thus, objectives for a specific IS staffer are tied to end users and to an overall IS plan that provides the big picture for objectives across the entire IS group. When it comes time to measure the performance of an IS pro, Brown again seeks user input.

With significant changes facing the health care industry, Brown says he realizes that objectives cannot remain fixed and inflexible. "Measurement and evaluations cannot be done simply by the numbers," he says.

ACCELERATED REVIEWS

The Linear Accelerator Center at Stanford University deals with state-of-the-art breakthroughs in our understanding of nature and matter. Similarly, IS must provide state-of-the-art systems to help the scientists and administrators achieve their lofty goals.

Roger Cottrell, assistant director of computing, notes there has been an interesting shift in the evaluations of its IS staff in the last few years. "We have discovered that programmers are now doing more analysis work and must be able to evaluate off-the-shelf systems, rather than being good coders and merely writing systems from scratch."

A formal performance process sets objectives and reviews performance for the IS staff. IS objectives are tied closely to business objectives, though making the connection can be elusive.

For example, an attempt to connect availability of the massive compute farms to the performance of network and hardware specialists was difficult. Thus, more qualitative aspects of effort, user response and operational performance are used.

FEEDBACK IS KEY

Leroy Harmeyer, director of IS at Baker Hughes, Inc., a Houston-based provider of oil field services to petroleum companies, seeks input from his users to evaluate IS staffers but realizes that sometimes the "squeaky wheel" user may not have justifiable reasons to complain about an IS employee. "You have to continually get feedback about your IS staff," Harmeyer notes. "Otherwise, you can be misled by a single piece of information that incorrectly says something about the performance of your IS staff."

In a recent patent and trademark tracking system that his group rolled out, Harmeyer watched how well the system met its targeted costs and dates. But even when you're using project performance to measure IS accomplishments, he says, you need to be cautious. "Did another project suddenly get put in place of one that someone was working on?" he asks.

In summary, a good performance program takes a comprehensive look at the IS employee and doesn't just blindly apply legalistic rules to the evaluation of IS professionals. ◆

Elliot is president of Elliot & Associates, an information technology consulting firm in Huntington Beach, Calif.

TOP TEN

These organizations have recently revamped their staff performance measurement to be more in line with business goals

- American Medical International, Inc.
- Baker Hughes, Inc.
- Du Pont Co.
- Pepsico, Inc.
- Stanford University
- Household International, Inc.
- Travelers Insurance Co.
- U.S. Department of Defense
- U.S. Department of Justice
- Washington Mutual Savings Bank

Source: Best Places to Work Survey

EVALUATE OUTSOURCERS, TOO

step 4 If part of the IS organization is outsourced, make outsourcing vendor contract goals match departmental objectives. Measure performance in a similar manner to that of in-house staff – i.e., through formal and informal feedback with the user and in-house staff discussions.

PLAN COURSE CORRECTIONS

step 5 Be ready to change the goals and objectives as business/organizational circumstances change. Communicate the need to redirect the department's and individual's objectives. Redirect them explicitly through formal meetings. Continue course changes through informal discussions with the professional, his customers and other appropriate contacts.

REVIEW AND REWARD

step 6 Combine reviews of project completion time and application quality with assessments of how well the professional worked with his user customers and in-house staff. Include reviews of how the overall performance matched changing organizational goals. Include all the feedback and final conversations with appropriate users and the professional in a final assessment.

Creating a knowledge environment

THESE ORGANIZATIONS TREAT TRAINING AS A SACRED TRUST WITH THEIR STAFFS

When it comes time to put a squeeze on the information systems budget, many managers are tempted to cut the allocation of resources devoted to training. Rather than formally investing in training, they often have a faint hope that harried IS professionals will learn what they need to know by osmosis or some other nonfunded, nonexplicit means.

According to the IS organizations that invest the highest percentage of their department budgets in training, such a backward view of the importance of training is likely to produce big headaches and failed projects. These organizations say training must be treated as a sacred trust with employees. Their examples clearly illustrate that you either pay for training now or end up paying dearly for it later.

Good IS application development managers know that a poor up-front development effort ultimately leads to out-of-control maintenance. Similarly, if IS managers do not invest in training their IS staffers up front, their ability to create new systems, meet customer demands and make IS a success is greatly diminished. Though the organizations described here may be above the norm, their utter devotion to training should be an example to those IS managers eyeing their training dollars. Keep training in your budget – it pays.

MAKING THE CONNECTION

There is no question that training gets top priority at Washington Mutual Savings Bank.

"We are devoted to training," says Steven Crenshaw, systems administrator, "and we formally make sure that equal education training opportunities are provided for the entire IS staff."

The banking institution, based in the state of Washington, uses both in-house trainers and outside vendors to meet the needs of its 300-plus IS staff members. Most of the activities are coordinated by its own training department – a formal group within IS that has adopted the name Learning Connection and regularly issues a list of courses, actively marketing its services throughout the IS function.

Crenshaw says IS managers at Washington Mutual Savings are encouraged to allocate training in their project budgets. For example, a recent office systems project included explicit funding for training courses on various office automation tools and off-the-shelf packages.

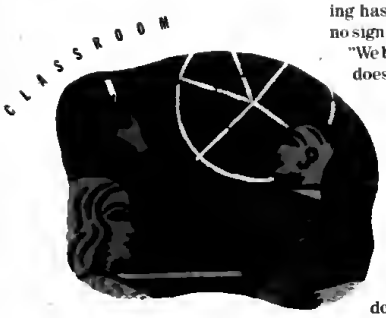
Though there is no fixed schedule of when IS staff should be trained, savvy IS managers at the savings bank are always watchful of new skills that might be needed for future projects. Using discretionary training dollars, they recently sent several IS staffers outside for state-of-the-art training in Novell, Inc. products.

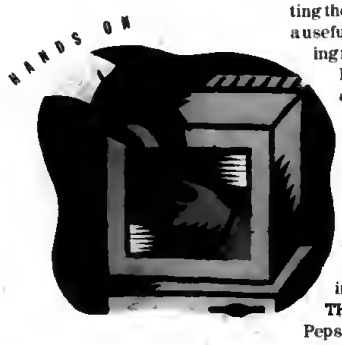
As Crenshaw put it, emphasis on IS training is really a reflection of the firm as a whole: "Everyone knows here that training is important, and in IS we take it just as seriously as the rest of the organization."

WINNING THE BATTLE

As a state-funded entity, Oregon's Veteran's Affairs agency has seen funding fluctuate in these uncertain economic times. Nonetheless, according to Herb Riley, IS manager at the agency, the or-

by lance b. eliot





Illustrations by Timothy Cook

ganizationwide commitment to training has remained in place and shows no sign of waning.

"We believe that a trained work force does a better job," Riley says.

Indeed, state requirements dictate that its IS group must provide a formal training plan yearly and devote a minimum of 2% of its salary base dollars to the funding of training activities.

As an Amdahl Corp. and Wang Laboratories, Inc. shop, much of the agency's training is done by outside vendors that offer cost-effective and comprehensive courses throughout the year, Riley says. He has also tried video and audio courses and a few computer-based training (CBT) courses.

"Generally, we found the CBT courses were too basic, and we weren't getting the human interaction that can be a useful ingredient in fully understanding new material," he observes.

For in-house training, the agency has set up a classroom with eight workstations. The facility has been valuable for training IS staffers and users. Besides formal training courses, Riley notes that the facility has been handy for informal get-togethers and readily provides a chance to try out new systems in a devoted setting.

THE TRAINING CHALLENGE

Pepsico, Inc., based in Purchase, N.Y., is no longer a single carbonated soft drink company. Today, it is a total beverage company offering bottled water, Lipton iced teas, fruit drinks and its venerable Pepsi core products. To become a diverse beverage provider, the company has undergone tremendous change and has completely re-engineered its IS activities.

"We don't wait around for change; we stay ahead of it," says Larry Panatera, director of technology implementation. "And one of the most important tools for achieving such change is training, training and more training."

Much of the recent focus on training has been for client/server tools and techniques. A rollout of applications on PCs and database servers led the company to develop special laboratories where training could coexist with testing of the new systems. In many cases, IS staff training took place right alongside the training of future users of the emerging systems.

"Training is a key factor in the success of client/server applications," Panatera notes. He advocates training before, during and after client/server systems are developed.

In addition to technical-oriented training, business-oriented training is often conducted as well.

"Besides tools training, we also have made sure that training on re-engineering and how to make business changes has been provided," Panatera says.

AMPLE SUPPLY OF TRAINING

Avery Dennison Corp., a leading supplier of office supplies, stickers and labels, makes training part of its culture, according to Stuart Gaiber, director of IS at the Avery Division.

"The values and culture of our company are supportive of training," Gaiber notes. "We make sure that our IS staff is kept up to date and able to fully utilize the latest tools and techniques for building strategic systems."

Training plays an especially important role when the company hires new IS staff or shifts IS staff to a new project. Gaiber stresses that companies should train staffers in advance of projects that require specific new skills rather than wait until those skills are suddenly needed.

For example, the Avery Division adopted computer-aided software engineering tools and progressively trained the entire IS staff in their use. Similarly, a recent effort to adopt groupware tools has integrated training into the whole tool rollout process.

"IS managers sometimes overemphasize investments in tools rather than investment in people," Gaiber warns. "I think about the skills and tools that I need to provide to the IS staff to help them accomplish their work, and then I get them the training and resources that will make them successful."

IS staffers at Avery are considered knowledge workers, Gaiber says, and training helps give them the added knowledge that keeps the label-making systems running. ●

Eliot is president of Eliot & Associates, an information technology consulting firm in Huntington Beach, Calif.

POINTS	COMPANY	STAFF GROWTH	PERCENT STAFF GROWTH	TURNOVER	TOP LEVEL SALARY
CONSUMER PRODUCTS AND SERVICES					
18	**Pepsico, Inc.**	**Increasing**	**6%-7%**	**5%**	**$100,000 plus**
16	CPC International, Inc.	Increasing	8%-10%	2%	$100,000 plus
15	**Duracell, Inc.**	**Increasing**	**1%-3%**	**1%**	**$100,000 plus**
14	Colgate-Palmolive Co.	Increasing	16%-20%	5%	$80,000-$100,000
14	**The New York Times**	**Increasing**	**4%-5%**	**5%**	**$100,000 plus**
13	Helene Curtis Industries, Inc.	Unchanged	—	5%	$100,000 plus
11	**The Coca-Cola Co.**	**Increasing**	**—**	**5%**	**$100,000 plus**
11	Farmland Industries, Inc.	Unchanged	—	5%	$80,000-$100,000
11	**The Turner Corp.**	**Unchanged**	**—**	**15%**	**$60,000-$80,000**
10	Harsco Corp.	Unchanged	—	10%	$60,000-$80,000
FINANCIAL SERVICES					
15	**Merrill Lynch & Co.**	**Increasing**	**16%-20%**	**25%**	**$100,000 plus**
13	Metropolitan Life Insurance Co.	Increasing	1%-3%	5%	$80,000-$100,000
12	**Golden West Financial Corp.**	**Increasing**	**1%-3%**	**15%**	**$80,000-$100,000**
12	New York Life Insurance Co.	Unchanged	—	5%	$100,000 plus
12	**Washington Mutual Savings Bank**	**Unchanged**	**—**	**5%**	**$40,000-$60,000**
11	First Fidelity Bancorp, Inc.	Unchanged	—	20%	$100,000 plus
11	**Household International, Inc.**	**Increasing**	**8%-10%**	**3%**	**$100,000 plus**
11	Travelers Insurance Co.	Decreasing	8%-10%	7%	$100,000 plus
11	**Unum Corp.**	**Decreasing**	**4%-5%**	**3%**	**$80,000-$100,000**
10	Bankers Trust New York Corp.	Increasing	4%-5%	8%	$80,000-$100,000
MANUFACTURING					
17	**3M Co.**	**Unchanged**	**—**	**5%**	**$100,000 plus**
16	Rubbermaid, Inc.	Increasing	—	5%	na
15	**Johnson & Johnson**	**Decreasing**	**—**	**5%**	**na**
15	Merck & Co.	Increasing	—	5%	na
14	**Ford Motor Co.**	**Decreasing**	**—**	**5%**	**na**
14	Martin Marietta Corp.	Increasing	8%-10%	10%	$100,000 plus
13	**Pfizer, Inc.**	**Decreasing**	**4%-5%**	**3%**	**$100,000 plus**
13	Willamette Industries, Inc.	Increasing	4%-5%	2%	$60,000-$80,000
12	**Echlin, Inc.**	**Unchanged**	**—**	**6%**	**$80,000-$100,000**
12	Outboard Marine Corp.	Unchanged	—	3%	$60,000-$80,000

na = not available

MEDIUM LEVEL SALARY	BOTTOM LEVEL SALARY	AVERAGE AGE OF MAJOR PROCESSORS	AVERAGE AGE OF MAJOR APPLICATIONS	PERCENT OF BUDGET SPENT ON TRAINING	LOCATION
$80,000-$100,000	$20,000-$40,000	1-3 years	1-3 years	2%-5%	Purchase, N.Y.
$60,000-$80,000	$20,000-$40,000	3-5 years	10 plus years	2%-5%	Englewood Cliffs, N.J.
$80,000-$100,000	$20,000-$40,000	1-3 years	3-5 years	2%-5%	Bethel, Conn.
$60,000-$80,000	$20,000-$40,000	3-5 years	3-5 years	<2%	New York
$80,000-$100,000	$40,000-$60,000	1-3 years	3-5 years	<2%	New York
$100,000 plus	$20,000-$40,000	3-5 years	3-5 years	2%-5%	Chicago
$80,000-$100,000	$20,000-$40,000	1-3 years	1-3 years	2%-5%	Atlanta
$40,000-$60,000	$20,000-$40,000	3-5 years	1-3 years	<2%	Kansas City, Mo.
$40,000-$60,000	$40,000-$60,000	1-3 years	3-5 years	2%-5%	New York
$40,000-$60,000	$20,000-$40,000	3-5 years	3-5 years	2%-5%	Camp Hill, Pa.
$60,000-$80,000	$40,000-$60,000	3-5 years	3-5 years	11%-20%	New York
$60,000-$80,000	$0-$20,000	1-3 years	10 plus years	2%-5%	New York
$60,000-$80,000	$20,000-$40,000	3-5 years	5-7 years	2%-5%	Oakland, Calif.
$40,000-$60,000	$20,000-$40,000	1-3 years	7-10 years	2%-5%	New York
$20,000-$40,000	$20,000-$40,000	1-3 years	1-3 years	31%-40%	Bellevue, Wash.
$60,000-$80,000	$40,000-$60,000	<1 year	5-7 years	2%-5%	Newark, N.J.
$60,000-$80,000	$20,000-$40,000	5-7 years	5-7 years	2%-5%	Northbrook, Ill.
$80,000-$100,000	$40,000-$60,000	1-3 years	5-7 years	2%-5%	Hartford, Conn.
$60,000-$80,000	$40,000-$60,000	3-5 years	5-7 years	2%-5%	Portland, Maine
$60,000-$80,000	$40,000-$60,000	1-3 years	3-5 years	2%-5%	New York
$60,000-$80,000	$20,000-$40,000	1-3 years	5-7 years	6%-10%	St. Paul, Minn.
na	na	na	na	2%-5%	Wooster, Ohio
na	na	na	na	2%-5%	New Brunswick, N.J.
na	na	na	na	2%-5%	Whitehouse Station, N.J.
na	na	na	na	2%-5%	Dearborn, Mich.
$60,000-$80,000	$20,000-$40,000	1-3 years	3-5 years	2%-5%	Bethesda, Md.
$100,000 plus	$20,000-$40,000	3-5 years	5-7 years	2%-5%	New York
$40,000-$60,000	$20,000-$40,000	<1 year	1-3 years	2%-5%	Portland, Ore.
$40,000-$60,000	$20,000-$40,000	1-3 years	1-3 years	<2%	Branford, Conn.
$40,000-$60,000	$20,000-$40,000	1-3 years	3-5 years	2%-5%	Waukegan, Ill.

POINTS	COMPANY	STAFF GROWTH	PERCENT STAFF GROWTH	TURNOVER	TOP LEVEL SALARY
PETROLEUM, CHEMICALS AND UTILITIES					
15	Burlington Resources, Inc.	Increasing	—	5%	na
15	Occidental Petroleum Corp.	Decreasing	4%-5%	4%	$100,000 plus
15	Pacific Gas & Electric Co.	Unchanged	—	5%	na
15	Philadelphia Electric Power Co.	Unchanged	—	2%	$100,000 plus
15	Shell Oil Co.	Decreasing	—	5%	na
14	Entergy Corp.	Increasing	16%-20%	8%	$100,000 plus
14	PPG Corp.	Decreasing	8%-10%	3%	$80,000-$100,000
12	Sherwin-Williams Co.	Unchanged	—	3%	$80,000-$100,000
10	Ohio Edison Co.	Increasing	1%-3%	6%	$60,000-$80,000
6	Du Pont Co.	Decreasing	4%-5%	5%	na

Cargill, Incorporated, based in Minneapolis, Minnesota with 17 divisions and 40+ product lines at more than 800 locations in over 50 countries, is one of the largest and most diversified private companies in the world. Our businesses are involved in producing, trading, transporting and processing commodities and financial investments and we provide excellent career opportunities for motivated team-oriented professionals. Our continued growth has resulted in a variety of positions becoming available to work on system conversion, process development and customization, and software implementation at various locations across the U.S. Our technical environment is moving towards the UNIX based client/server arena, though we currently utilize a variety of IBM Mainframe, midrange and PC networks.

BUSINESS SYSTEMS ANALYSTS

Analysts are needed to evaluate and implement various software packages at various locations. Some positions will require 80% travel. Applicants must have a BA/BS with a major or minor in Computer Science or MIS (or equivalent experience) and previous experience with financial modules, order processing, product quality and/or production planning and scheduling applications. Business systems definition, software package evaluation and implementation experience, along with strong communication and teamwork skills are required.

ANALYST PROGRAMMERS

These positions are responsible for leading development teams to build and reengineer systems by performing requirements definition, process and data design, prototype construction and refinement, multi-site deployment, design and construction of interfaces to various other new subsystems. To qualify, you must have a BA/BS with a major or minor in Computer Science or MIS (or equivalent experience) and strong project planning and control experience. In addition, broad experience in requirements definition, process design, data design, system construction and implementation are highly desirable.

SYSTEMS/APPLICATIONS PROGRAMMERS

Highly motivated Programmers are needed to design, develop, document and implement efficient systems that support various business activities. Systems Programmers are needed to develop and support the technical infrastructure. To qualify, you must have a BA/BS with a major or minor in Computer Science or MIS (or equivalent experience) and 2-3 years of applications or systems programming experience. UNIX systems administration and PC LAN knowledge are highly desired. Experience with DNS, CCMAIL, OPENMAIL and knowledge of Novell and OS/2 preferred.

Career development is an integral part of the Cargill experience. Employees are given the tools to have a rewarding career, challenging responsibilities, ample opportunities, and educational enrichment. Effort and expertise are rewarded with a competitive compensation and benefits package. For consideration, please submit your resume, including salary requirements and position of interest, to: Cargill, Inc., Amy Fermoyle, Human Resources #10, P.O. Box 5697, Minneapolis, MN 55440. Fax (612) 742-5693. No phone calls please.

Equal Opportunity Employer

CARGILL

MEDIUM LEVEL SALARY	BOTTOM LEVEL SALARY	AVERAGE AGE OF MAJOR PROCESSORS	AVERAGE AGE OF MAJOR APPLICATIONS	PERCENT OF BUDGET SPENT ON TRAINING	LOCATION
na	na	na	na	2%-5%	Houston
$80,000-$100,000	$40,000-$60,000	1-3 years	1-3 years	2%-5%	Los Angeles
na	na	na	na	2%-5%	San Francisco
$60,000-$80,000	$40,000-$60,000	1-3 years	na	2%-5%	Philadelphia
na	na	na	na	2%-5%	Houston
$80,000-$100,000	$40,000-$60,000	1-3 years	5-7 years	2%-5%	New Orleans
$60,000-$80,000	$20,000-$40,000	<1 year	1-3 years	2%-5%	Chicago
$40,000-$60,000	$20,000-$40,000	3-5 years	5-7 years	6%-10%	Cleveland
$40,000-$80,000	$20,000-$40,000	3-5 years	5-7 years	2%-5%	Akron, Ohio
na	na	na	5-7 years	2%-5%	Wilmington, Del.

na = not available

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As a leading, full-service information technology consulting firm, The Registry, Inc. (TRI) is one of the nation's fastest-growing, private companies in the information technology services industry. Our entrepreneurial spirit and enthusiastic team have driven our 60% annual growth rate and rapid geographic expansion to 17 offices serving clients in 38 states across the country. Due to our dynamic plans for continued expansion nationally and globally, we are seeking to add the following experienced professionals to our team:

Career Opportunities

For your career advancement, recognition of achievement and unparalleled potential for reward, the opportunity is real.

All positions require excellent communication, presentation and customer service skills. Bachelor's degree and experience serving clients in the financial, telecommunications, systems integration or software industries preferred.

Sales Executives
- 3+ years selling IT consulting or staff augmentation
- Advanced ability in prospecting new accounts and developing long-term client relationships
- Ability to multi-task and fully leverage cross-functional resources
- Experience in consultative selling practice desired

Principal Consultants
- 5+ years development & project management with SI or IT consulting firm
- Ability to manage multiple tasks and projects
- Advanced proposal development skills
- Knowledge of client/server architecture preferred

Technical Specialist

Seeking IT professionals with 3 + years experience in the following areas.
- Legacy Systems.
- Database Development.
- Desktop Development
- Networks & Communications
- Client/Server-Architectures

Recruiters
- 2+ years technical recruiting experience
- Advanced ability to build and leverage a network of skilled professionals
- Experience with IT industry preferred

In addition to attractive salaries and compensation packages, The Registry offers an extensive benefits package which includes 401K plans, health and dental insurance, and training programs. Please mail or fax your resume and a cover letter describing your salary requirements, desired TRI office locations, and a summary of your technical and client industry experience. *No phone calls please.*

About The Registry...
From staff augmentation to full project delivery, we work with a network of TRI technical specialists, strategic partners, and consultants to develop a just-in-time team with the right business, technical and industry experience to meet the specific needs of each client engagement.

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POINTS	COMPANY	STAFF GROWTH	PERCENT STAFF GROWTH	TURNOVER	TOP LEVEL SALARY
TELECOMMUNICATIONS AND COMPUTERS					
15	**Bell Atlantic Corp.**	**Decreasing**	**1%-3%**	**4%**	**$100,000 plus**
15	Microsoft Corp.	Increasing	—	5%	na
14	**BellSouth Corp.**	**Unchanged**	**—**	**5%**	**na**
12	AT&T Corp.	Unchanged	—	5%	na
12	**Hewlett-Packard Co.**	**Increasing**	**—**	**5%**	**na**
10	Ameritech Corp.	Unchanged	—	0%	$60,000-$80,000
10	**Electronic Data Systems Corp.**	**Increasing**	**—**	**5%**	**na**
9	MCI Communications Corp.	Unchanged	—	5%	na
9	**Sun Microsystems, Inc.**	**Increasing**	**—**	**5%**	**na**
8	Compaq Computer Corp.	Increasing	—	5%	na

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As one of the largest and fastest growing Bankcard processing companies in the world, Total System Services, Inc. provides card issuing institutions with a sophisticated, on-line system of bankcard and credit card data processing services. The company processes Visa, MasterCard, and Diner's Club, as well as private label, debit and corporate cards.

With a nationwide data communications network, TSYS offers customers a full range of services, from card production to international and domestic clearing, statement preparation to customer service support, and merchant accounting to manage- ment reporting. In addition, the company provides correspondence products, direct marketing and promotional services to financial institutions, airlines, health care organizations, and other businesses.

Due to aggressive expansion plans, the company is seeking qualified Data Processing & Management professionals to join its developmental operations team. Positions are available in Georgia and Florida. We are looking for candidates who are currently employed or have a minimum of 2 years experience in the following areas:

- **DATABASE ADMINISTRATORS**
- **SYSTEMS PROGRAMMER ANALYSTS**
- **TECHNICAL WRITERS**
- **QUALITY ANALYSTS**
- **PROGRAMMERS COBOL, ASSEMBLER, NOMAD, CICS, IMS/DB; DB2, MVS/JCL, VSAM**

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FAX: (706) 649-4801

EOE

MEDIUM LEVEL SALARY	BOTTOM LEVEL SALARY	AVERAGE AGE OF MAJOR PROCESSORS	AVERAGE AGE OF MAJOR APPLICATIONS	PERCENT OF BUDGET SPENT ON TRAINING	LOCATION
$60,000-$80,000	$20,000-$40,000	1-3 years	1-3 years	2%-5%	Arlington, Va.
na	na	na	na	2%-5%	Redmond, Wash.
na	na	na	na	2%-5%	Atlanta
na	na	na	na	2%-5%	New York
na	na	na	na	2%-5%	Palo Alto, Calif.
$40,000-$60,000	$20,000-$40,000	na	3-5 years	<2%	Hoffman Estates, Ill.
na	na	na	na	2%-5%	Houston
na	na	na	7-10 years	2%-5%	Washington
na	na	na	na	2%-5%	Mountain View, Calif.
na	na	na	na	2%-5%	Houston

na = not available

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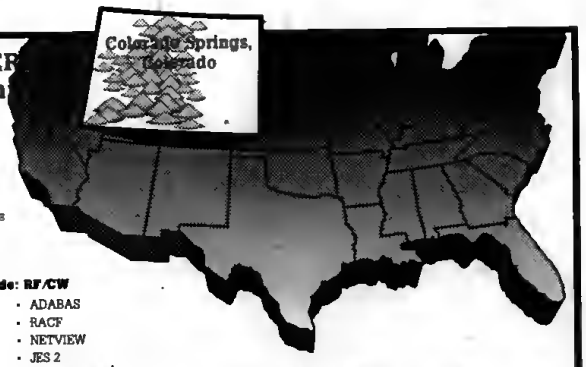
MCI SYSTEMS ENGINEER
Technology & Opportun



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We offer a competitive salary and benefits package, plus opportunities for professional development and training for participants in MCI's challenging career climate in Colorado Springs, Colorado.

IBM SYSTEMS PROGRAMMERS – Response Code: RF/CW

- SYSTEMS PROGRAMMING
- PERFORMANCE TUNING
- CAPACITY PLANNING
- DASD MANAGEMENT
- DATABASE ADMINISTRATION
- TAPE MANAGEMENT
- LIBRARY MANAGEMENT
- STORAGE MANAGEMENT
- MVS/ESA
- DFP/ESA
- DFSMS
- DFDSS
- DFHSM
- CICS
- DB2
- IMS
- OPS/MVS
- ADABAS
- RACF
- NETVIEW
- JES 2
- OMEGAMON
- VTAM
- MICS
- SAS

APPLICATIONS & SW TEST SOFTWARE ENGINEERS & PROGRAMMERS SYSTEMS ADMINISTRATORS – Response Code: AR/CW

- SES SIMULATION/MODELING
- ACD
- IBM MAINFRAMES
- STRATUS
- RISC 6000
- DEC VAX
- PCs
- WORKSTATIONS
- MS-DOS
- VAX/VMS
- FOXPRO
- UNIX
- AIX
- VOS
- OS/2
- RDB
- GUI
- C
- C++
- COBOL
- COBOL II
- PL/1
- ADABAS/NATURAL
- POWERHOUSE
- PRESENTATION MANAGER
- OBJECT-ORIENTED
- DB2
- CICS
- VSAM
- SYBASE
- DEC TOOLS
- X.25
- X.400
- X.500
- TCP/IP

LAN/WAN DESIGNERS & ANALYSIS ENGINEERS – Response Code: BD/CW

- TOKEN RING
- APPN
- TCP/IP
- NETVIEW/6000
- VTAM
- NCP
- SNA
- ROUTERS
- BRIDGES
- CISCO
- WELLFLEET
- IBM 6611

Send your resume and include Response Code to **MCI Telecommunications Corporation, 2424 Garden of the Gods Road, Department 1833, Colorado Springs, CO 80919.**

MCI

We are an equal opportunity employer

POINTS	COMPANY	STAFF GROWTH	PERCENT STAFF GROWTH	TURNOVER	TOP LEVEL SALARY
STATE AND FEDERAL GOVERNMENT					
17	U.S. Department of Justice	Unchanged	—	4%	$60,000-$80,000
17	U.S. General Services Administration	Unchanged	—	10%	$100,000 plus
15	U.S. Department of Treasury	Increasing	—	2%	$100,000 plus
15	State of Texas	Increasing	4%-5%	0%	$40,000-$60,000
14	U.S. Arms Control & Disarmament Agency	Increasing	16%-20%	10%	$100,000 plus
14	State of California	Increasing	4%-5%	1%	$60,000-$80,000
14	U.S. Department of Agriculture	Unchanged	—	3%	$80,000-$100,000
14	U.S. Department of Defense	Unchanged	—	5%	$60,000-$80,000
14	U.S. Department of Veteran Affairs	Increasing	16%-20%	1%	$100,000 plus
14	State of Washington	Increasing	8%-10%	5%	$60,000-$80,000
13	U.S. Department of Commerce	Increasing	6%-7%	2%	$80,000-$80,000
13	U.S. Environmental Protection Agency	Increasing	—	1%	$80,000-$100,000
13	Library of Congress	Increasing	<1%	1%	$60,000-$80,000
EDUCATION					
16	Case Western Reserve University	Increasing	1%-3%	0%	$80,000-$100,000
16	University of Miami	Increasing	<1%	2%	$80,000-$100,000
15	University of Wisconsin	Increasing	8%-10%	na	$60,000-$80,000
14	University of Alabama	Unchanged	—	3%	$20,000-$40,000
13	Duke University	Increasing	>20%	5%	$60,000-$80,000
13	Harvard University	Unchanged	—	5%	na
13	MIT	Unchanged	—	5%	na
13	St. Louis University	Increasing	>1%	2%	$40,000-$60,000
13	Stanford University	Unchanged	—	3%	$80,000-$100,000
13	University of Minnesota	Unchanged	—	4%	$60,000-$80,000
13	University of Texas	Unchanged	1%-3%	10%	$60,000-$80,000

na = not available

MEDIUM LEVEL SALARY	BOTTOM LEVEL SALARY	AVERAGE AGE OF MAJOR PROCESSORS	AVERAGE AGE OF MAJOR APPLICATIONS	PERCENT OF BUDGET SPENT ON TRAINING	LOCATION
$60,000-$80,000	$40,000-$60,000	1-3 years	1-3 years	21%-30%	Washington
$60,000-$80,000	$20,000-$40,000	>5 years	7-10 years	<2%	Washington
$80,000-$100,000	$40,000-$60,000	1-3 years	3-5 years	<2%	Washington
$20,000-$40,000	$20,000-$40,000	1-3 years	1-3 years	11%-20%	Austin, Texas
$60,000-$80,000	$20,000-$40,000	1-3 years	1-3 years	6%-10%	Washington
$40,000-$60,000	$20,000-$40,000	1-3 years	3-5 years	2%-5%	Sacramento, Calif.
$60,000-$80,000	$20,000-$40,000	3-5 years	3-5 years	6%-10%	Arlington, Va.
$60,000-$80,000	$20,000-$40,000	3-5 years	1-3 years	6%-10%	Washington
$80,000-$100,000	$20,000-$40,000	1-3 years	3-5 years	<2%	Washington
$40,000-$60,000	$20,000-$40,000	<1 year	<1 year	6%-10%	Olympia, Wash.
$40,000-$60,000	$20,000-$40,000	3-5 years	>10 years	2%-5%	Washington
$40,000-$60,000	<$20,000	<1 year	>10 years	2%-5%	Washington
$40,000-$60,000	$20,000-$40,000	1-3 years	5-7 years	<2%	Washington
$60,000-$80,000	$20,000-$40,000	1-3 years	1-3 years	2%-5%	Cleveland
$40,000-$60,000	$20,000-$40,000	1-3 years	1-3 years	11%-20%	Coral Gables, Fla.
$40,000-$60,000	$20,000-$40,000	1-3 years	<1 year	6%-10%	Kenosha, Wis.
$20,000-$40,000	<$20,000	<1 year	<1 year	2%-5%	Birmingham, Ala.
$40,000-$60,000	$20,000-$40,000	1-3 years	1-3 years	2%-5%	Durham, N.C.
na	na	na	na	2%-5%	Cambridge, Mass.
na	na	na	na	2%-5%	Cambridge, Mass.
$20,000-$40,000	$20,000-$40,000	3-5 years	1-3 years	2%-5%	St. Louis
$60,000-$80,000	$20,000-$40,000	3-5 years	7-10 years	<2%	Menlo Park, Calif.
$40,000-$60,000	$20,000-$40,000	1-3 years	3-5 years	2%-5%	Lauderdale, Minn.
$40,000-$60,000	$20,000-$40,000	1-3 years	1-3 years	2%-5%	Austin, Texas

POINTS	COMPANY	STAFF GROWTH	PERCENT STAFF GROWTH	TURNOVER	TOP LEVEL SALARY
TRANSPORTATION					
16	**Federal Express Corp.**	**Increasing**	**5%**	**2%-5%**	**na**
16	WorldCorp, Inc.	Increasing	8%-10%	1%	$60,000-$80,000
12	**United Parcel Service, Inc.**	**Increasing**	**—**	**6%**	**na**
11	Southwest Airlines Co.	Increasing	4%-5%	5%	$60,000-$80,000
11	**Werner Enterprises, Inc.**	**Increasing**	**8%-10%**	**3%**	**na**
9	CSX Corp.	Decreasing	6%-7%	15%	$100,000 plus
7	**AMR Corp.**	**Unchanged**	**—**	**5%**	**na**
7	Carolina Freight Corp.	Unchanged	—	0%	na
7	**J. B. Hunt Transport Service, Inc.**	**Unchanged**	**—**	**10%**	**na**
7	Norfolk Southern Corp.	Unchanged	—	5%	na

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MEDIUM LEVEL SALARY	BOTTOM LEVEL SALARY	AVERAGE AGE OF MAJOR PROCESSORS	AVERAGE AGE OF MAJOR APPLICATIONS	PERCENT OF BUDGET SPENT ON TRAINING	LOCATION
na	na	na	na	5%-10%	Memphis
$60,000-$80,000	$40,000-$60,000	1-3 years	1-3 years	2%-5%	Herndon, Va.
na	na	na	na	2%-5%	Atlanta
$40,000-$60,000	$20,000-$40,000	na	3-5 years	2%-5%	Dallas
na	na	1-3 years	1-3 years	2%-5%	Omaha
$60,000-$80,000	$20,000-$40,000	<1 year	7-10 years	<2%	Richmond, Va.
na	na	na	na	<2%	Dallas
na	na	1-3 years	10 plus years	2%-5%	Cherryville, N.C.
na	na	1-3 years	1-3 years	<2%	Lowell, Ark.
na	na	na	na	2%-5%	Norfolk, Va.

na = not available

MVS ■ VSAM ■ JCL ■ HOGAN ■ CICS ■ MVS TECH SUPPORT ■ EASYTRIEVE PLUS ■ TANDEM ■ IMS ■ VSAM ■ SQL ■ IMS TECH SUPPORT ■ STRATUS ■ TSO / ISPF ■ DB2 ■ COBOL ■ CICS ■ TANDEM ■

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At NationsBank, we look for those MIS pros who speak the languages of information management and programming and can communicate with clarity. Our success is dependent on an adept mastery of technology, so we look for people with a very high level of skill, innovative thinking, determination and creativity. If you're such a person and are interested in an exceptional career with the third largest bank in the U.S., then come speak to us.

Our growth across the country has created a demand for individuals with a wide variety of technical disciplines and platforms, including:

- **Mainframe application development and support**
- **MVS technical support**
- **Midrange (Tandem and Stratus) technical support**
- **Client/Server development and support**

Previous work in a banking environment is beneficial, but not required. We currently have exciting opportunities in Atlanta, Charlotte, Dallas, and Richmond.

At NationsBank, you'll find an opportunity to showcase your skills with an aggressive industry leader. You'll discover that we're speaking your language when it comes to our excellent compensation and benefits package with exceptional growth and advancement potential as well. For immediate consideration, please send your resume and salary requirements to one of the addresses below:

For opportunities in Atlanta: NationsBank, Management Recruiting, GA1-006-04-14; Dept. CW-CP, 600 Peachtree St., Atlanta, GA 30308.

For opportunities in Charlotte: NationsBank, Management Recruiting, NC1-007-21-08; Dept. CW-DW, 100 N. Tryon St., Charlotte, NC 28255.

For opportunities in Dallas: NationsBank, Management Recruiting, TX1-492-47-01; Dept. CW-SK, P.O. Box 831000, Dallas, TX 75283-1000.

For opportunities in Richmond: Management Recruiting, NationsBank Corporate Center, VAZ-125-01-01; Dept. CW-MH, 8001 Villa Park Drive, Richmond, VA 23228.

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POINTS	COMPANY	STAFF GROWTH	PERCENT STAFF GROWTH	TURNOVER	TOP LEVEL SALARY
WHOLESALE AND RETAIL					
17	McDonald's Corp.	Unchanged	—	3%	$100,000 plus
15	Levi Strauss Associates, Inc.	Increasing	5%	5%	na
14	Kellwood Co.	Increasing	—	5%	$100,000 plus
14	VF Corp.	Increasing	6%-7%	3%	$100,000 plus
14	Wal-Mart Stores, Inc.	Unchanged	—	5%	na
12	The Home Depot, Inc.	Unchanged	—	5%	na
11	Sysco Corp.	Decreasing	>20%	2%	na
9	Publix Super Markets, Inc.	Unchanged	—	5%	na
9	Supervalu, Inc.	Unchanged	—	1%	$20,000-$40,000
8	JC Penney Co.	Unchanged	—	7%	na

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MEDIUM LEVEL SALARY	BOTTOM LEVEL SALARY	AVERAGE AGE OF MAJOR PROCESSORS	AVERAGE AGE OF MAJOR APPLICATIONS	PERCENT OF BUDGET SPENT ON TRAINING	LOCATION
$80,000-$100,000	$40,000-$60,000	1-3 years	1-3 years	<2%	Oakbrook, Ill.
na	na	na	<1 year	2%-5%	San Francisco
$60,000-$80,000	$40,000-$60,000	1-3 years	3-5 years	<2%	St. Louis
$60,000-$80,000	$20,000-$40,000	1-3 years	7-10 years	2%-5%	Wyomissing, Pa.
na	na	na	1-3 years	6%-10%	Bentonville, Ark.
na	na	na	1-3 years	2%-5%	Atlanta
na	na	1-3 years	5-7 years	2%-5%	Houston
na	na	1-3 years	<1 year	2%-5%	Lichland, Fla.
$20,000-$40,000	<$20,000	1-3 years	1-3 years	<2%	Cranston, R.I.
na	na	>5 years	5-7 years	6%-10%	Plano, Texas

na = not available

SAP'S R/2 & R/3.

Software Professionals

"SAP's dedication to superior technology has made us one of the largest, most successful and fastest growing software companies in the world."

With the advance of open systems, business process technology is the next strategic challenge. For this reason, many forward thinking companies have already put the R/3 System to work.

Like our proven R/2 mainframe software, SAP's client/server based R/3 is a fully integrated package, managing company-wide applications from Manufacturing, Finance and Order Processing to Human Resources functions.

The following positions are available at our operations located throughout the United States - Atlanta, Boston, Chicago, Cincinnati, Cleveland, Dallas, Detroit, Foster City (San Francisco/San Jose), Houston, Los Angeles, Minneapolis, Northern New Jersey, Philadelphia, St. Louis and Seattle.

PRESALES

APPLICATIONS - Qualified individuals will have 3 - 5 years experience in a presales software environment in either Manufacturing, Sales/Order Processing, Finance and/or Human Resource Applications

TECHNICAL - Applicants should have presales experience in any of the following areas: Development Tools, CASE, and Workflow Management/Office Automation Systems.

Candidates for these positions should have "hands-on" software installation experience and the ability to aid in the positioning of the sales effort for success.

CONSULTANTS

Candidates should possess a minimum of 3 - 5 years experience in the installation of various software packages related to Manufacturing, Sales/Order Processing and Distribution, Finance, and Human Resources. Prior experience in a consulting and/or software environment would be ideal.

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Our R/3 system utilizes relational data base technology and runs on UNIX and other Open Systems with support for front ends running MS Windows, MOTIF and PM. We currently seek "hands-on" professionals with experience in the following:

• Data Base Administration • UNIX System Administration • Networking

We offer an exceptional salary and benefits package including profit sharing. Individuals interested in exploring these opportunities should FAX or mail a resume and salary requirements in confidence to: **Recruiting Manager, Dept. CW, SAP America, Inc., International Court Three, 300 Stevens Drive, Philadelphia, PA 19113. FAX (215) 595-4919.** *Equal Opportunity Employer, M/F/D/V*

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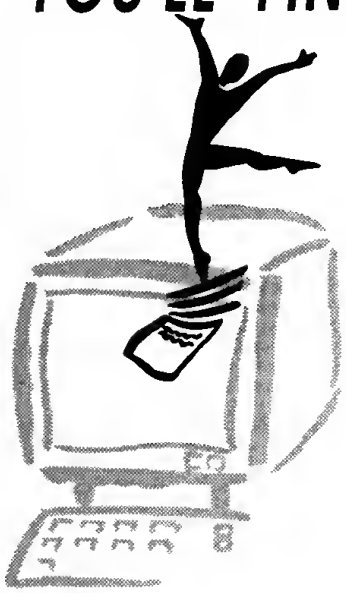

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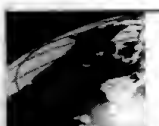

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Strategic Services

EOE

John Cleese on the workplace

That old chestnut "It's the squeaky wheel that gets the grease" is fine if you're managing machinery, but people are bright enough to recognize this management style and adapt by squeaking loudly.

"It doesn't matter how skillfully I organize the department when I have to implement my plans with this sorry lot!" says Mr. Johnson, peering from the doorway at his npathetic, careless subordinates. "You might as well design a notebook-size mainframe and hire a family of baboons to construct it."

Perhaps the well-organized Johnson could find the source of his troubles if he'd stop gazing out the door and look in the mirror instead. Because without effective management, even departments composed of highly talented employees will inevitably fail. And effective management entails both organizational *and* motivational skills.

We tend to he awestruck by leaders like your General Patton, Vince Lombardi or Dr Ruth, who motivate others to enthusiastically grapple with physical challenges and achieve a satisfying outcome. But the ability to instill motivation isn't a mystical quality imparted at hirth. It comes down toa set of simple principles.

To motivate your staff, you must instill in them three kinds of confidence:

CONFIDENCE IN THE VALUE OF their job. People will perform their jobs better if they are seen within the context of a larger goal. The programmer charged with coding an automated toilet handle-jiggling mechanism control sequence may be less than enthusiastic in the pursuit of her Inbors. If, however, she realizes that this mechanism will be employed on the Space Shuttle to prevent EVA (Exceremental Vehicular Activity), her work is likely to take on real urgency. Employees need to understand the value and importance of their function. And you must set a good example. If you loudly bemoan your own fate as slave to mindless executive lust for sexier silicon, how motivated will your subordinates feel?

CONFIDENCE IN THEIR VALUE AS individuals. Too often managers focus exclusively on the problems that confront them and forget to praise those who are performing well. That old chestnut "It's the squeaky wheel that gets the grease" is fine if you're managing machinery, but people are bright enough to recognize this management style and adapt by squeaking loudly, or breaking down entirely as a way of winning your attention. Actively seeking out areas where you can administer praise will prevent those annoying squeaks.

Your employees also need to feel challenged in their work. If a task is too simple, successfully completing it provides little sense of accomplishment and, hence, little motivation.

Another key to motivating employees is treating them with appropriate personal concern. If Henderson suddenly starts arriving at the office bleary-eyed and late, don't simply bark out a reprimand — ask why. You may be able to ease personal problems by offering a little time off or a more flexible schedule. And even if you can't actually help at all, at least your expression of concern shows that you value your employees as human beings.

CONFIDENCE IN THEIR VALUE AS a team. Finally, you need to encourage employees to feel, think and work as a team. Your role in helping them feel like a team is giving them your loyalty and support, protecting them from outsiders and encouraging their efforts as a group. To help people think like a team, encourage group decision-making. Be open to suggestions and encourage two-way communication. And to help people work like a team, encourage group interaction and an understanding of how each individual's work serves an interrelated function.

While the word "motivation" does have its roots in the Latin "motus," or movement, motivating your staff is not simply a matter of imparting motion. You can create movement with a sharp stick in the posterior, but bottom line, that creates resentment and poor performance.

Truly motivating your staff involves giving them a motive for performing at their best — a goal to pursue, a reason to proceed. By focusing your staff's efforts on reaching the goals that lie ahead rather than avoiding a pain in the behind, you can spend your time leading rather than pushing.

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